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★ Chief Inspector of Mines

Twenty-Sixth Annual Report
TO THE GOVERNOR
OF THE STATE OF OHIO



For the Fiscal Year 1900

Twenty-Sixth Annual Report

OF THE

Chief Inspector of Mines

TO THE

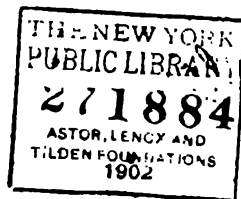
Governor of the State of Ohio

FOR THE

FISCAL YEAR 1900.



COLUMBUS, O.:
FRED. J. HERR, STATE PRINTER
1902



NOV 23 1902

Office of the Chief Inspector of Mines,

Columbus, Ohio, January 31, 1902.

Hon. George K. Nash, Governor of Ohio:

SIR:—As Chief Inspector of Mines of the State of Ohio, I hereby submit the twenty-sixth annual report of the Mining Department as required in Section two hundred and ninety-three of the Revised Statutes.

Very respectfully,

E. G. BIDDISON,
Chief Inspector of Mines.

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Annual Report.

To His Excellency, George K. Nash, Governor of the State of Ohio :

SIR:— In compliance with section two hundred and ninety-three of the Revised Statutes relating to Mines and Mining I herewith submit the Twenty-sixth Annual Report of this Department.

That portion of this report relative to the Inspection of Mines covering the period from November 15, 1899, to May 1, 1900, was under the direct supervision of my worthy predecessor, Hon. R. M. Haseltine.

On the above-named date I received the appointment as Chief Inspector of Mines at your hands, and immediately assumed charge of the Department, appointing, by your approval and sanction, the following District Mine Inspectors: First District, R. M. Mason, Logan, Ohio; Second District, D. H. Williams, Clouster, Ohio; Third District, D. B. Wilson, Corning, Ohio; Fourth District, Thomas McGough, Bridgeport, Ohio; Fifth District, W. H. Turner, Cambridge, Ohio; Sixth District, James P. Davis, Dell Roy, Ohio; and for the seventh district, W. H. Miller, Massillon, Ohio.

I desire to express to you my appreciation of the diligent and efficient manner in which the above named inspectors have acquitted themselves in performing the duties of the positions entrusted to them.

The statistical portion of this report has been arranged to conform to the calendar year, while that portion which is devoted to the inspecting of mines extends from November 15, 1899, to November 15, 1900.

On February 20, 1900, at a meeting held at Columbus, Ohio, between the Ohio State Officials of the United Mine Workers of America, by their duly authorized representatives, and the operators of the Hocking Valley District (being the basis on which prices are calculated for the other Districts of the State), the price of mining was fixed and adjusted from April 1, 1900 to April 1, 1901, as follows. Price to be paid for pick mining per ton for screened lump coal, eighty cents; for run of mine, 5-7 lump price, fifty-seven and one-seventh cents; coal mined by the Jeffrey type of mining machine, nine cents per ton, etc. A detailed list of the mining scale as adopted at this meeting occurs later in this report through the courtesy of F. S. Brooks, secretary of the Ohio Coal Association.

There was no disturbance between capital and labor during the year of any great importance, strikes being of a local nature and of short duration.

The following is a general summary representing the principal facts of interest as compiled from the statistical blanks sent out by this department for the year 1900, requesting data on the coal, iron ore, fire clay and limestone industries of the state.

Number of coal producing counties.....	30
Total output for the year 1900.....	19,426,649
Total output of fire clay.....	1,473,088
Total output of iron ore.....	52,266
Amount of coal mined by machinery.....	9,457,777
Amount of pick mined coal.....	9,968,872
Number of mining machines in use.....	362
Number of mines in which mining machines are in use.....	88
Number of counties using mining machines.....	14
Number of persons employed in the industry.....	31,682
Number of miners employed.....	24,273
Number of day hands employed.....	7,409
Number of hands operating machines.....	1,117
Number of hands following machines.....	8,384
Amount of powder consumed in the production of coal (kegs).....	262,153
Amount of coal produced from the use of powder.....	15,873,365
Number of mines in the state.....	1,072
Number of mines in operation during the year.....	1,001
Number of new mines opened up.....	89
Number of mines suspended during the year.....	71
Number of mines that were abandoned during the year.....	74
Number of inspections made.....	1,706
Number of sets of scales tested.....	131
Number of permanent improvements made.....	170
Average time worked during the year.....	173 4-15
Number of casualties.....	424
Number of fatal accidents.....	68
Number of serious accidents.....	207
Number of minor accidents.....	149
Amount of coal mined to the life lost.....	285,692

There was a gain in the coal production for the year of 3,517,715 tons as compared with the preceding year. Of the 19,426,649 tons of coal mined for the year 1900, 9,457,777 tons of this amount was produced by the use of mining machinery, a gain of 2,716,717 tons, as shown from the amount produced in this manner for the year 1899.

There was a gain in the number of miners employed amounting to 2,762. A gain in the number of day hands employed is also shown, the number reaching 912.

Of the 1,072 mines in the state, 1,001 were in operation during the year. Eighty-nine new mines were opened up, seventy-one ceased operation for the year, and seventy-four were entirely abandoned.

One thousand seven hundred and six inspections were made by the several different mine inspectors. One hundred and thirty-one sets of scales were tested as compared with 120 for the preceding year.

The number and character of the permanent improvements for the year were as follows: Total, one hundred and seventy, distributed as

follows: Twenty-four furnaces built, twenty-seven fans erected, sixty-nine air shafts sunk, thirty-one second openings made; safety catches, one; stairways built, nine; speaking tubes, one; and ventilating baskets placed in air shafts, eight.

The average time worked for the year was one hundred and seventy-three and four-fifteenths days, a gain of twenty and fourteen-fifteenths, as compared with the year 1899.

The increase in the output of fire clay amounted to 299,391 tons.

The iron ore production for the year shows an increase of 26,907 tons.

The returns received from the limestone industry show gains in the following classifications into which the industry is divided: Fluxing, building stone, piers and protection, flagging and macadam. Losses occur in the following classifications: Lime, dimension, paving and curbing. There was a gain in the number of days worked as well as in the number employed in the industry.

Owing to a change in the personnel of the Department there appears in this report the work as accomplished by ten district mine inspectors, three resigning during the fiscal year, having only served a portion of the year 1900. The inspectors appointed to fill the unexpired terms thus made vacant have submitted their reports for the length of time they were in charge of their districts up to the close of the year.

The reports of the several district mine inspectors is followed by a detailed list, giving the name and postoffice address of firms operating coal, fire clay and iron ore mines, and limestone quarries.

The mining laws are embodied in this report as a ready reference for persons interested in the Mining Industry. The index follows last.

PRODUCTION OF COAL FOR THE YEAR.

The production of coal in Ohio for the year 1900, was so far in excess of that of any former year as to excite universal gratification among persons interested in the coal mining industry.

The total tonnage for the year was 19,426,649 tons, which was a net gain of 3,517,715 tons over the production for 1899, which was the largest of any previous year. The whole year has been marked as one of unusual activity in the coal mining districts as well as in the other departments of work.

The adjoining table classifies the production of the mines as lump, nut and pea and slack. For the year covered by this report the lump coal mined in the state amounted to 14,234,260 tons, which exceeded the amount produced in 1899 by 2,510,978 tons.

The nut coal mined this same year was 2,218,001 tons, a gain of 324,174 tons over the year 1899, while in pea and slack there was a gain of 682,553 tons, making the production in 1900, 2,794,388 tons.

In the year 1900 we find Athens county heading the list in the total production of 2,594,859 tons of coal, instead of Jackson county which for three years previous had been first in the amount of coal produced in the state, while Perry follows closely with a production of 2,517,251 tons. Although occupying third place in the amount of coal produced in the year 1900, Jackson county shows a gain of 139,564 tons over the year 1899. Hocking county comes fourth in the production of coal while four other counties produced more than a million tons of coal ranking as follows: Guernsey, Belmont, Tuscarawas and Stark. Jefferson county ranks ninth in the production of coal, the amount being over 900,000, and Coshocton ranks tenth. The ten counties mentioned supply 17,369,592 tons or 89 7-10 per cent of the whole product of coal for the state, a gain of 14-10 per cent over that of the year 1899.

The Hocking Valley consisting of the counties of Athens, Hocking and Perry supplied to the trade 7,423,776 tons of coal in the year 1900, being an increase of 1,983,726 tons over the product of 1899. This production was 38 1-5 per cent of the total output of the state.

In the year 1899 it was 34 2-10 per cent of the entire production, and in 1893, which was the largest of any previous year, it was 38 4-10 per cent.

The second table following shows the coal production in 1900 as compared with that of 1899. Referring to the table it will be seen that gains occur in twenty-five of the thirty coal-producing counties making a total gain of 3,644,668 tons, while five counties, namely, Columbiana, Lawrence, Portage, Carroll and Medina show losses, the total for these five counties being 126,953 tons, leaving a net gain of 3,517,715 tons. Three counties show gains of over 500,000 tons, Athens county

with 833,084 tons; Perry 768,736 tons and Guernsey 590,607 tons. Athens and Guernsey counties both show gains in the year 1899, but Perry shows a loss of 41,368 tons, as compared with the year 1898.

TABLE SHOWING THE COAL PRODUCTION OF THE STATE BY COUNTIES DURING THE YEAR 1900.

Counties.	Tonnage for 1900.			Total.	Rank in Production.
	Lump.	Nut.	Pea and Slack.		
Athens	2,077,372	214,111	303,376	2,594,859	1
Belmont	1,028,175	210,278	356,916	1,595,369	6
Carroll	135,961	25,922	43,758	205,641	14
Columbiana	459,478	112,606	146,024	718,108	10
Coshocton	240,253	48,319	77,573	366,145	11
Gallia	12,828		3,310	16,138	26
Guernsey	1,235,147	278,539	390,695	1,904,381	5
Harrison	28,734	2,933	4,420	36,087	23
Holmes	8,901	2,160	1,905	12,966	27
Hocking	1,871,027	231,945	208,707	2,311,679	4
Jackson	1,681,126	362,982	275,213	2,319,321	3
Jefferson	726,049	49,514	195,646	971,209	9
Lawrence	88,775	17,048	7,050	112,873	17
Mahoning	77,044	14,425	17,879	109,348	18
Medina	110,371	16,593	25,803	152,767	15
Meigs	201,941	5,765	41,354	249,060	13
Morgan	19,354	4,300	6,300	29,954	24
Monroe	2,497		436	2,933	29
Muskingum	226,445	31,125	53,977	311,547	12
Noble	83,579	3,154	2,313	89,046	20
Perry	1,929,049	244,610	343,599	2,517,258	2
Portage	75,103	12,156	15,982	103,241	19
Scioto	6,706	1,528	3,423	11,657	28
Stark	853,171	104,199	192,862	1,150,232	8
Summit	95,597	10,041	17,350	122,988	16
Trumbull	16,201	1,002	1,978	19,181	25
Tuscarawas	845,828	201,643	219,714	1,267,185	7
Vinton	58,646	8,156	10,429	77,231	21
Washington	2,330	90	259	2,679	30
Wayne	36,572	2,857	6,137	45,566	22
Totals	14,234,260	2,218,001	2,974,388	19,426,649	

TABLE SHOWING THE COAL TONNAGE OF THE STATE FOR 1900
AS COMPARED WITH 1899.

Counties.	1899.	1900.	Gain.	Loss.
Athens	1,761,775	2,594,859	833,084	.....
Belmont	1,259,520	1,595,369	335,849	.....
Carrroll	212,051	205,641	.....	6,410
Columbiana	799,474	718,108	.....	81,366
Coshocton	364,702	366,145	1,443	.....
Gallia	14,470	16,138	1,668	.....
Guernsey	1,313,774	1,904,381	590,607	.....
Harrison	29,852	36,087	6,235	.....
Holmes	12,321	12,966	645	.....
Hocking	1,929,753	2,311,679	381,926	.....
Jackson	2,179,757	2,319,321	139,564	.....
Jefferson	935,979	971,209	35,230	.....
Lawrence	135,064	112,873	.....	22,191
Mahoning	74,309	109,348	35,039	.....
Medina	158,216	152,767	.....	5,449
Meigs	225,149	249,060	23,911	.....
Morgan	24,881	29,954	5,073	.....
Monroe	2,720	2,933	213	.....
Muskingum	220,854	311,547	90,693	.....
Noble	66,714	89,046	22,332	.....
Perry	1,748,522	2,517,253	768,736	.....
Portage	114,778	103,241	.....	11,537
Scioto	8,424	11,657	3,233	.....
Stark	1,073,750	1,150,232	76,482	.....
Summit	86,100	122,988	36,888	.....
Trumbull	11,059	19,181	8,122	.....
Tuscarawas	1,053,238	1,267,185	213,947	.....
Vinton	71,072	77,231	6,159	.....
Washington	2,099	2,679	580	.....
Wayne	18,557	45,568	27,009	.....
Totals	15,908,934	19,426,649	3,644,668	126,953
Net gain .....	.....	.....	3,517,715	.....

TABLE SHOWING THE COAL OUTPUT OF THE STATE FROM 1872 TO 1900 INCLUSIVE.

Years.	Output.	Gain.	Loss.
1872	5,313,294		
1873	4,550,028		76,528
1874	3,267,585		128,224
1875	4,864,259	1,596,674	
1876	3,500,000		1,364,259
1877	5,250,000	1,750,000	
1878	5,500,000	250,000	
1879	6,000,000	500,000	
1880	7,000,000	1,000,000	
1881	8,225,000	1,225,000	
1882	9,450,000	1,225,000	
1883	8,229,429		1,220,571
1884	7,650,062		579,367
1885	7,816,179	166,117	
1886	8,435,211	619,032	
1887	10,301,708	1,866,479	
1888	10,910,946	613,338	
1889	10,907,385		9,561
1890	11,788,850	881,474	
1891	13,050,187	1,261,328	
1892	14,599,908	1,549,721	
1893	14,828,097	228,189	
1894	11,910,219		2,917,878
1895	13,683,879	1,773,660	
1896	12,912,608		771,271
1897	12,448,822		463,786
1898	14,058,155	1,609,333	
1899	15,908,934	1,850,799	
1900	19,426,649	3,517,715	

COAL MINED BY MACHINERY DURING THE YEAR.

The accompanying table shows the number of tons of machine-mined coal for the year 1900 to be 9,457,777, which is a gain of 2,712,517 tons over the production of the year 1899.

In fourteen of the coal producing counties machines were in use in the year 1900, Stark, Tuscarawas and Noble having been added to the list, while in Meigs the use of machines was abolished. In 1899 the number of hands operating machines was eight hundred and forty-one which number was increased in 1900 to one thousand one hundred and seventeen, making a gain of two hundred and seventy-six, the largest gain of any previous year. The number of hands following machines in 1899 was six thousand two hundred and ninety-nine, which was increased in 1900 by two thousand and eighty-five, making the total number eight thousand three hundred and eighty-four. Athens county takes the lead in the number of hands operating and following machines, the total number being two thousand seven hundred and forty-five, while the number of tons of coal mined is 2,317,478. Hocking comes second with a production in coal of 2,271,846 tons, mined by one thousand nine hundred and sixty-eight machine hands. Guernsey county ranks third and Perry fourth each producing very nearly one and three-quarter million tons.

As compared with the year 1899 all the counties in which machines were in use show an increase in the production of coal by that means with the exception of Columbiana and Portage, the combined loss in these two counties amounting to 77,695 tons.

TABLE SHOWING THE AMOUNT OF COAL MINED BY MACHINERY,
THE TIME WORKED, AND THE NUMBER OF MEN EMPLOYED IN
MACHINE MINING.

Counties.	Days worked.	Hands following machines.	Hands operating machines.	Lump.	Nut.	Pea and slack.	Totals
Athens	222	2,390	355	1,886,999	178,608	251,871	2,317,478
Belmont	116	203	40	95,598	16,970	30,616	143,184
Carroll	212	18	14	30,156	5,015	10,031	45,202
Columbiana	232	210	30	187,730	43,067	59,329	290,126
Guernsey	216	1,406	156	1,133,381	257,362	346,432	1,737,175
Hocking	216	1,796	172	1,841,708	226,673	203,465	2,271,846
Jackson	239	287	68	329,120	45,754	37,810	412,684
Jefferson	243	403	58	216,758	13,636	65,153	295,547
Muskingum ..	200	10	3	31,120	.....	1,036	32,156
Noble	265	65	8	55,440	.....	.....	55,440
Perry	184	1,398	181	1,351,355	131,418	220,332	1,703,105
Portage .....	.....	.....	4	5,738	.....	.....	5,738
Stark	59	48	6	10,861	1,012	2,850	14,723
Tuscarawas ..	100	150	22	100,033	10,666	22,674	133,373
Totals	2,504	8,384	1,117	7,275,997	930,181	1,251,599	9,457,777
Average	179	.....	.....	.....	.....	.....	.....

TABLE SHOWING THE ANNUAL PRODUCTION OF MACHINE MINED
COAL SINCE THE INTRODUCTION OF ELECTRICITY INTO THE
MINES OF THE STATE.

Years.	Output.	Gain.	Loss.
1889	900,000	.....	.....
1890	1,148,499	248,499	.....
1891	1,654,081	505,632	.....
1892	2,239,080	584,999	.....
1893	2,553,074	313,994	.....
1894	2,555,466	2,392	.....
1895	3,120,456	564,990	.....
1896	3,368,349	247,893	.....
1897	4,106,124	737,775	.....
1898	5,252,598	1,146,474	.....
1899	6,741,060	1,488,462	.....
1900	9,457,777	2,716,717	.....

MINES IN WHICH MINING MACHINES HAVE BEEN INSTALLED AND THE NUMBER AND KIND OF EACH:

The names of the counties containing mines where machines were in use for the year 1900 will be found in the preceding table, the total number being fourteen. Instead of seventy-four machine mines, the number in 1899, we find that number increased by fourteen in 1900, making a total of eighty-eight, the use of machines having been abolished by five of the mines which used them in the year 1899. During the year the machine mines were increased by the addition to the list of the following: In Athens county, Half Moon, Daleton Number Two, Jobs Number Seventeen and Kimberly; Belmont Number Two in Belmont County; Huff Run in Carroll County; Old Orchard, Little Kate and Black Top in Guernsey county; Columbus in Hocking county; Springfield in Jackson county; Conners Number One and Two and Walnut Hill in Jefferson county; Glenwood in Noble county; Number Twenty and Number Five in Perry County; Krause Number Four in Stark county; Thompson Run East, and Thompson Run West in Tuscarawas county. The five mines in which the use of machines were discontinued are Somers Number Five in Carroll county, Guernsey and Cambridge in Guernsey county, Silver Run in Meigs county and New Pittsburg Number Nine which is now worked in connection with Number Eight in Hocking county.

By noticing the table it will be observed that the number of electric machines in use in 1900 were three hundred and twenty-two, an increase of eighty-six over the number used in 1899, while in 1898 the number was but forty-two less than in the year 1899. But as the electric machines increase those depending upon compressed air correspondingly decrease in number. In 1898 there were in use fifty-eight compressed air machines; in 1899, forty-four, while in 1900 there were but forty, although during this time the number of machines in use in the mines was gradually increasing.

In 1900 there were forty mines in which were used a total of fifty electric motors for hauling coal as compared with twenty-five mines using twenty-eight in the year 1899. Thus it will be noticed that the mule is being rapidly superseded by the electric motor.

TABLE SHOWING THE NUMBER, MANUFACTURER, MOTIVE POWES, ETC.—Continued.

Name of Mine.	County.	Electricity.				Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent or Link Belt Co.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll Sergeant.	
Coalgate	Hocking	2	2			12			Jeffrey.
No. 15	"	12				12			Jeffrey.
Cawthorn	"	12	4			12			
Consol	"	12	12			12			
Snake Hollow	"	12	12			12			
Lost Run	"	12	4			12			
Sand Run	"	1				12			
Brush Fork No. 2	"	12				12			
Brush Fork No. 3	"								
Tom Corwin No. 1	Jackson		3	1			3		Independent Link-Belt.
Machine Coal Co.									
Milton No. 1	"	20							Jeffrey.
Milton No. 2	"								Jeffrey.
Milton No. 3	"								
Enterprise	"	3				12		12	
Star No. 4	"								
Springfield	"	5							3 Jeffrey.
Dillon No. 2	Jefferson	3							2 Jeffrey.
Long Run	"	7							
Conner No. 1	"	2							
Conner No. 2	"	1							
High Shaft	"		2						Morgan-Gardner.
Kelley No. 2	"		3						Morgan-Gardner.
Walnut Hill	"		5						Jeffrey.
Werner No. 3	Muskingum	1							

TABLE SHOWING THE NUMBER, MANUFACTURER, MOTIVE POWER, ETC.—Concluded.

Name of Mine.	County.	Electricity.					Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent or Link-Belt Co.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergant.	Jacoby.	
Glenwood	Noble									Independent Link-Belt.
C. & H. C. & I. No. 3	Perry			3						2 Morgan-Gardner.
No. 21	"	2	4							Jeffrey.
No. 8	"		8							Jeffrey.
Congo No. 1	"	12	4							Jeffrey.
Congo No. 2	"									Morgan-Gardner.
Congo No. 3	"		4							
Rends No. 3	"									
Upson No. 1	"	3								
Superior	"		1							
Keystone No. 1	"									
Mingo	"	1								
No. 12	"	4								
No. 18	"		2							
No. 20	"	3								
No. 5	"	1								
Keystone No. 2	"									
Hutson No. 4	Portage				2					Morgan-Gardner.
Krause No. 4	Stark			3						
East Goshen	Tuscarawas									
Thompson Run, East	"	6								Jeffrey.
Thompson Run, West	"									Jeffrey.
Totals		143	153	14	12	8	24	7	1	50

NUMBER OF MINES IN OPERATION AND THE TIME
WORKED AS COMPARED WITH THE YEAR 1899.

The accompanying table shows that the number of mines in operation in 1899 was one thousand and fifty-five, while for the year 1900 the number was but one thousand and one, being a total loss of fifty-four. The year 1898 is still in the lead as having the largest number of mines in operation, the number reported for that year being one hundred more than 1899, which is second, and twenty-nine more than 1897 which ranks third.

In Athens county the greatest gain occurred, there being twelve more mines in operation than that shown for the preceding year, while Columbiana shows a gain of ten; Mahoning, one; Perry, three, and Vinton, two, making a total of twenty-eight. The total losses amount to eighty-two, the largest occurring in Muskingum and Meigs, the losses aggregating twenty and fourteen, respectively.

It is very gratifying to observe that while the average number of days worked in 1899 was but 152 and 1-3 days, this number being nearly two more than for the two preceding years, in 1900 the average number amounts to 173 and 4-15 days, which is proof of the fact that the coal trade was more active than for several years previous. Of the thirty coal producing counties, twenty-two show gains in the number of days worked, while of the eight that show lossess, Lawrence shows the greatest, the loss in that county being twenty-seven days.

TABLE SHOWING COMPARATIVELY THE NUMBER OF MINES OPERATED AND DAYS WORKED IN 1899 AND IN 1900.

Counties.	Number of mines worked in 1899.	Number of mines worked in 1900.	Gain.	Loss.	Average number days worked in 1899.	Average number days worked in 1900.	Gain.	Loss.
Athens	40	52	12	.....	153	157	4	.....
Belmont	68	60	.....	8	176	173	.....	3
Carroll	27	21	.....	6	175	181	6	.....
Columbiana	53	63	10	.....	189	203	14	.....
Coshocton	26	23	.....	3	205	192	.....	13
Gallia	5	5	.....	.....	116	149	33	.....
Guernsey	28	26	.....	2	186	182	.....	4
Harrison	53	53	.....	.....	127	137	10	.....
Holmes	11	11	.....	.....	171	230	59	.....
Hocking	18	17	.....	1	142	176	34	.....
Jackson	79	73	.....	6	151	172	21	.....
Jefferson	50	49	.....	1	168	161	.....	7
Lawrence	26	22	.....	4	201	174	.....	27
Mahoning	36	37	1	.....	163	188	25	.....
Medina	12	12	.....	.....	201	189	.....	12
Meigs	45	31	.....	14	141	165	24	.....
Morgan	2	2	.....	.....	107	162	55	.....
Monroe	4	4	.....	.....	99	148	49	.....
Muskingum	124	104	.....	20	151	175	24	.....
Noble	49	47	.....	2	118	146	28	.....
Perry	85	88	3	.....	149	177	28	.....
Portage	4	4	.....	.....	174	209	35	.....
Scioto	7	7	.....	.....	95	127	32	.....
Stark	81	75	.....	6	168	185	17	.....
Summit	14	13	.....	1	178	172	.....	6
Trumbull	7	7	.....	.....	119	163	44	.....
Tuscarawas	77	73	.....	4	185	185	.....	.....
Vinton	12	14	2	.....	128	138	10	.....
Washington	6	2	.....	4	69	180	111	.....
Wayne	6	6	.....	.....	166	202	36	.....
Totals	1,055	1,001	28	82	152-11/30	173-4/15	699	72

LARGE AND SMALL MINES IN THE STATE AND THE NUMBER THAT WERE IN OPERATION DURING THE YEAR.

In the year 1900, the number of large mines found in the state amounted to four hundred and thirty-two, in comparison with four hundred and seventeen, the number reported for 1899, showing an increase of fifteen, while the number of small mines show a decrease over that of 1899, the number being six hundred and forty, a loss of seventy-six. The largest falling off occurs in Meigs and Muskingum, each of which shows a loss of twelve.

The enormous increase in the coal output for 1900 over that of 1899 shows that the loss in small mines was comparatively unimportant, being much more than overbalanced by the product of the additional large mines that were opened during the year. It is difficult to estimate with any degree of correctness the amount of coal produced by these small mines, as many of them are opened purely for domestic purposes, and no accurate account of the amount of coal produced by them is kept.

In the number of large mines Jackson county occupies first place, having fifty-six instead of fifty-four in 1899; Perry follows second with forty-eight, an increase of one, while Athens comes third with forty-two, this being eight more than the number reported in 1899, when that county occupied fifth place in the number of large mines.

Of the total number of large and small mines that were in operation during 1900, one thousand and one of the one thousand and seventy-two worked either the whole or a part of the year. Of the four hundred and thirty-two large mines but twenty-seven were suspended throughout the whole of the year, while five hundred and ninety-four of the total six hundred and forty small mines were worked more or less the past year.

TABLE SHOWING THE NUMBER OF LARGE AND SMALL MINES IN THE STATE AND THE NUMBER OF EACH THAT WERE IN OPERATION DURING 1900.

Counties.	Number of mines which employ more than 10 men.	Number of mines which employ less than 10 men.	Total by counties.	Number large mines in operation during 1900.	Number small mines in operation during 1900.	Total number mines in operation during 1900.
Athens	42	12	54	41	11	52
Belmont	28	37	65	26	34	60
Carroll	11	11	22	10	11	21
Columbiana	31	34	65	29	34	63
Coshocton	14	9	23	14	9	23
Gallia	2	5	7	2	3	5
Guernsey	16	14	30	14	12	26
Harrison	2	52	54	2	51	53
Holmes		11	11		11	11
Hocking	17	3	20	15	2	17
Jackson	56	26	82	53	20	73
Jefferson	19	36	55	16	33	49
Lawrence	6	18	24	5	17	22
Mahoning	8	31	39	8	29	37
Medina	7	5	12	7	5	12
Meigs	13	20	33	12	19	31
Morgan	2		2	2		2
Monroe		5	5		4	4
Muskingum	15	103	118	15	89	104
Noble	2	46	48	2	45	47
Perry	48	42	90	48	40	88
Portage	4		4	4		4
Scioto	1	6	7	1	6	7
Stark	36	44	80	32	43	75
Summit	3	10	13	3	10	13
Trumbull	2	5	7	2	5	7
Tuscarawas	34	43	77	33	40	73
Vinton	9	8	17	7	7	14
Washington	1	1	2	1	1	2
Wayne	3	3	6	3	3	6
Totals	432	640	1,072	407	594	1,001

MINERS AND DAY HANDS.

Miners comprise all those engaged in mining coal with a pick, besides those operating machines and shooting down and loading the coal into mine cars.

Of this class of laborers there were employed during the year twenty-four thousand two hundred and ninety-three, a gain of two thousand seven hundred and sixty-two over the number so employed for the year 1899. Of the total coal producing counties, twenty-two show gains in the number of miners employed, Athens county leading with a gain of eight hundred and sixty-six, followed by Jefferson, Perry, Tuscarawas and Hocking in the order named.

Not only in the gain in the number of miners employed does Athens county exceed all other counties, but in the number of day hands as well, the number of day hands employed in that county being three thousand one hundred and five, while Jackson is second with two thousand eight hundred and eighty-eight, Perry third with two thousand six hundred and forty-three, followed by Hocking, Stark, Belmont, Guernsey, Tuscarawas, Jefferson, and Columbiana, all of which have over one thousand miners.

Day hands are divided into two classes — those working inside and those employed on the outside of the mine, including those whose labor is paid for by the day. The number of day hands employed average about one-third of the number of miners. The returns show that the number of day hands employed in the state during the year 1900 was seven thousand four hundred and nine, a gain of nine hundred and twelve so engaged in the year 1899.

The same number of counties which showed gains in the number of miners employed, also show gains in the number of day hands with Athens county first, Perry second and Hocking third.

As to the total number of day hands employed Jackson is far ahead in the lead with one thousand two hundred and seventy-four, Athens second with nine hundred and eighty, Perry third, having eight hundred and twenty-nine, while the corresponding gains in each of these counties were sixty, two hundred and ninety-three and one hundred and sixty-six, respectively. Hocking ranks third in the number gained with one hundred and four, making the total number five hundred and eighty-four.

NEW MINES OPENED, SUSPENDED AND ABANDONED.

The number of new mines opened during the year ending November 15th, 1900, was eighty-nine, a gain of twenty-eight over the preceding year. These are distributed among twenty of the thirty coal producing counties, Muskingum having the largest number, which is fourteen, Athens second with twelve, Perry third, having nine and Stark and Columbiana each seven, followed by Jefferson with six.

The number of mines which were suspended during the whole or a part of the year from various causes was seventy-one, a decrease of seven from the year 1899. Muskingum county, as in the number of new mines opened, leads in the number of mines that were suspended, having also fourteen of this latter class, followed by Jackson with nine, and Jefferson six; Stark and Belmont each have five.

Instead of fifty-one mines, as worked out and abandoned in 1899, in 1900, that number was increased to seventy-four, which were found in twenty of the coal producing counties of the state. Muskingum county has the largest number, eighteen in all, Perry ranking second with thirteen and Noble third with nine.

TABLE SHOWING THE NUMBER OF MINES OPENED, SUSPENDED
AND ABANDONED DURING THE YEAR.

Counties.	Number of new mines opened.	Number of mines suspended.	Number of mines abandoned.
Athens	13	2	3
Belmont	4	5	1
Carroll	3	1	3
Columbiana	7	2	5
Coshocton			1
Gallia		2	
Guernsey	5	4	
Harrison	1	1	
Holmes			2
Hocking	2	3	1
Jackson	2	9	3
Jefferson	6	6	1
Lawrence	1	2	1
Mahoning	3	2	1
Medina			1
Meigs	2	2	1
Morgan			
Monroe		1	
Muskingum	14	14	18
Noble	4	1	9
Perry	9	2	13
Portage	1		
Scioto			
Stark	7	5	4
Summit			1
Trumbull			
Tuscarawas	3	4	3
Vinton	2	3	2
Washington			
Wayne	1		
Totals	89	71	74

**DETAILED LIST OF NEW MINES OPENED, SUSPENDED
AND ABANDONED DURING THE YEAR.**

ATHENS COUNTY.

New mines.	Suspended.	Abandoned.
Daleton No. 2.....	Federal Valley No. 2....	Bessie.
Doanville No. 1, 2 and 3..	Cliff	Briar Hill No. 2.
Somers No. 2, 3, 4 and 5..	.....	.....
Case Run .....	.....	.....
West Floodwood .....	.....	.....
Jobs No. 1 and 2.....	.....	.....

BELMONT COUNTY.

New mines.	Suspended.	Abandoned.
Kenyon No. 1.....	McConaughy	Wheeling Creek No. 2.
Tin Plate	Davis & Archer.....	.....
Applegarth	Renker .....	.....
Hepburn	Hughes .....	.....
.....	Franklin .....	.....

CARROLL COUNTY.

New mines.	Suspended.	Abandoned.
Beatty No. 2.....	Starkey	Davis No. 3.
Davis No. 6.....	.....	Sherrodsville No. 5 New.
Linden No. 2.....	.....	Starkey.

COLUMBIANA COUNTY.

New mines.	Suspended.	Abandoned.
Pleasant Valley No. 2.....	Foster	Prospect Hill.
Lisbon	Cherry Valley No. 4.....	Campbell.
State Line No. 3.....	.....	Dewey.
Hicks .....	.....	Carbon Hill No. 1.
Prospect Hill No. 2.....	.....	Carbon Hill No. 4.
Manila .....	.....	.....
Woster .....	.....	.....

COSHOCOTON COUNTY.

New mines.	Suspended.	Abandoned.
		Wade No. 1.

GALLIA COUNTY.

New mines.	Suspended.	Abandoned.
	D. D. Morgan.....	
	Thos. E. Evans.....	

GUERNSEY COUNTY.

New mines.	Suspended.	Abandoned.
Black Top	C C C	
Little Kate	Guernsey	
Ideal	E. F. Barton	
Indian Camp	James Likes	
Virginia		

HARRISON COUNTY.

New mines.	Suspended.	Abandoned.
Tippecanoe	William Sheets	

HOLMES COUNTY.

New mines.	Suspended.	Abandoned.
		Bowen.
		Seigenthaler.

HOCKING COUNTY.

New mines.	Suspended.	Abandoned.
New Pittsburg No. 7,.....	No. 29	Sand Run No. 1.
Columbus	Black Diamond .....	.....
.....	Ira Achauer .....	.....

JACKSON COUNTY.

New mines.	Suspended.	Abandoned.
Armstrongs	Iron Valley	Central.
Halls	Ohio or Indiana.....	Eliza.
.....	Gallia Coal and Lime....	Poling No. 2.
.....	Klondike Coal Co. ....	.....
.....	John A. Davis.....	.....
.....	Clare Duduit & Co.....	.....
.....	John S. Evans.....	.....
.....	Hurd Slope .....	.....
.....	Etna .....	.....

JEFFERSON COUNTY.

New mines.	Suspended.	Abandoned.
Conner No. 1.....	New Slope	Long Run No. 2.
Conner No. 2.....	Co-operative .....	.....
Taylor	Bustard .....	.....
Diamond No. 3.....	H. Slater .....	.....
Rolling Mill No. 3.....	A. C. Permar.....	.....
Edgar No. 1.....	Jas. Cooper .....	.....

LAWRENCE COUNTY.

New mines.	Suspended.	Abandoned.
Pine Grove Coal.....	Belfont	Eagle.
.....	Heskel Coal .....	.....

MAHONING COUNTY.

New mines.	Suspended.	Abandoned.
Fairview No. 3.....	Jones Bros	Beloit Shaft.
Chestnut Hill	Jos. Leshner .....	.....
Stambaugh .....	.....	.....

MEDINA COUNTY.

New mines.	Suspended.	Abandoned.
.....
.....	Silver Creek.
.....

MEIGS COUNTY.

New mines.	Suspended.	Abandoned.
Coal Ridge No. 2.....	J. W. Natross.....	Excelsior.
Koehler Bros	Glendale .....	.....
.....

MONROE COUNTY.

New mines.	Suspended.	Abandoned.
.....
.....	Wm. Steel .....	.....
.....

MUSKINGUM COUNTY.

New mines.	Suspended.	Abandoned.
P. Miller	Bruce	Niebel.
Edwards No. 2.....	Hopkins	Wallwork No. 1.
Melvins No. 2.....	McConnell	Werners No. 3.
Joseph Moore	Jamison	Edwards No. 1.
Harper	Chestnut Valley No. 2...	Harpers No. 3.
Spaulding	Miles No. 1.....	Grieners No. 2.
Princess	McCormick No. 1.....	Lewis Harper.

MUSKINGUM COUNTY — Concluded.

New mines.	Suspended.	Abandoned.
Natingly	McCormick No. 2.....	Ashcraft.
Bowden	Wallwork No. 2.....	McCann No. 1.
Wellers No. 3.....	Tarman & Bro.....	Neathers No. 2.
Wellers No. 4.....	Homer	Hoff.
Mrs. S. Copeland.....	Trimble	Frank Dick.
Nethers No. 3.....	Hock	Amore.
Chas. Harper	Wheeler No. 2.....	Wellers No. 2.
.....	.....	Grangers No. 2.
.....	.....	Smith No. 1.
.....	.....	Joe Bridwell.
.....	.....	Copeland.

NOBLE COUNTY.

New mines.	Suspended.	Abandoned.
Day No. 2.....	D. R. Curtis.....	Little.
Springer	Schott.
Vanfossen	Okey.
Vance No. 4.....	Yonally No. 2.
.....	Vance No. 1.
.....	Vance No. 2.
.....	McClintock No. 3.
.....	Mt. Ephriam No. 2.
.....	Tucker.

PERRY COUNTY.

New mines.	Suspended.	Abandoned.
Keystone No. 2.....	John Bell	Chestnut Hill No. 2.
Chestnut Hill No. 3.....	Howe	Chestnut Hill No. 3.
Midway No. 1.....	Dickson.
Midway No. 2.....	Fannie.
Midway No. 3.....	Horn No. 1.
Lyonsdale No. 2.....	Clover Hill No. 2.
Butler	Iron Point No. 1.
Iron Point No. 3.....	No. 75.
Chestnut Ridge No. 2.....	Black Diamond.
.....	Green Hollow No. 1.
.....	Hart.
.....	Bristol No. 2.
.....	Chestnut Ridge No. 1.

PORTAGE COUNTY.

New mines.	Suspended.	Abandoned.
Filer Shaft

STARK COUNTY.

New mines.	Suspended.	Abandoned.
West Brookfield No. 2....	Fox Run	Camp Creek.
Clover Hill No. 2.....	S. Massillon	Hern Brook.
Warwick No. 2.....	Minglewood Slope	Brush Hill.
Stark	David Naysmith	West Brookfield No.
Tally Ho	Canton Stoneware .....	.....
Creston .....	.....	.....
Indian Run .....	.....	.....

SUMMIT COUNTY.

New mines.	Suspended.	Abandoned.
.....	Pleasant View.

TUSCARAWAS COUNTY.

New mines.	Suspended.	Abandoned.
Indian Hill	Gordon	Buckeye.
Thompson Run East.....	Wm. Krantz	Tunnel No. 2.
Thompson Run West.....	J. E. Murray.....	Gordon.
.....	Penna. Iron & Coal Co....	.....

VINTON COUNTY.

New mines.	Suspended.	Abandoned.
Elk Fork Shaft.....	Heasley	Elks.
Wykoff	Hanging Rock	Newlun.
.....	Wykoff .....	.....

WAYNE COUNTY.

New mines.	Suspended.	Abandoned.
West Lebanon No. 1.....

INSPECTIONS OF MINES DURING THE YEAR.

From November 15th, 1899, to the close of the fiscal year ending November 15th, 1900, the number of inspections made by the several district mine inspectors, as shown by the records, was one thousand seven hundred and six, this being ninety-two less than the number made during the previous year. This decrease is probably due to the fact that the state was not only redistricted but a change occurred in the district inspectors as well, three having resigned and new inspectors taking their places.

The first district, in charge of R. M. Mason, shows a total of two hundred and thirteen visits; the second district, in charge of D. H. Williams, shows a total of three hundred and two; third district, under the supervision of D. B. Wilson, four hundred and forty-five; fourth district, in charge of Thos. McGough, two hundred and four; fifth district, under W. H. Turner, two hundred and four; sixth district, under the supervision of James P. Davis, one hundred and seventeen, and the seventh district, in charge of W. H. Miller, one hundred and sixty-two.

From an examination of the following table it will be observed that Perry county received the greatest number of visits, the total numbering two hundred and forty-one; Athens follows, with a total of two hundred and nineteen; Muskingum, one hundred and fifty-one; Jackson, one hundred and forty-five, and Belmont one hundred and thirty-three, these counties being the ones receiving the greatest number of visits. The second table shows the number of visits made in the seven districts of which the state is composed.

TABLE SHOWING THE NUMBER OF VISITS MADE IN EACH COUNTY DURING THE YEAR.

Counties.	Number of mines visited													Totals.
	once.	twice.	three times.	four times.	five times.	six times.	seven times.	eight times.	nine times.	eleven times.	thirteen times.	eighteen times.	thirty-eight times.	
Number visits..	1	2	3	4	5	6	7	8	9	11	13	18	38	
Athens	16	11	10	6	7	2	...	...	2	1	1	...	1	219
Belmont	15	8	7	9	6	...	1	1	...	...	...	...	...	133
Carroll	5	3	4	2	...	...	...	...	...	...	...	...	...	31
Columbiana	32	10	7	4	3	1	...	...	...	...	...	...	...	110
Coshocton	1	8	2	1	1	...	...	...	...	...	...	...	...	32
Gallia	1	1	...	...	...	...	...	...	...	...	...	...	...	3
Guernsey	7	...	4	5	2	2	...	1	...	...	...	...	...	69
Harrison	12	...	...	...	...	...	...	...	...	...	...	...	...	12
Hocking	4	5	1	4	2	...	1	1	...	...	...	...	...	58
Holmes	9	...	...	...	...	...	...	...	...	...	...	...	...	9
Jackson	8	9	12	9	8	...	1	...	...	...	...	...	...	145
Jefferson	22	9	3	...	2	...	...	...	...	...	...	...	...	59
Lawrence	8	2	3	2	...	...	...	...	...	...	...	...	...	29
Mahoning	9	1	2	1	1	...	...	...	...	...	...	...	...	26
Medina	5	...	3	...	1	...	...	...	...	...	...	...	...	19
Meigs	9	4	1	4	2	...	...	...	...	...	...	...	...	46
Morgan .....	...	...	...	1	...	1	...	...	...	...	...	...	...	10
Monroe .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muskingum	84	10	4	7	...	...	1	...	...	...	...	...	...	151
Noble	38	...	...	...	1	...	...	...	...	...	...	...	...	43
Perry	28	14	8	6	9	3	4	1	1	1	...	1	...	241
Portage	1	1	2	...	...	...	...	...	...	...	...	...	...	9
Scioto .....	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Stark	26	8	7	4	3	1	2	...	...	...	...	...	...	114
Summit	4	...	...	1	1	...	...	...	...	...	...	...	...	13
Trumbull .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuscarawas	31	8	3	4	5	1	...	...	...	...	...	...	...	103
Vinton	4	2	...	...	...	...	...	...	...	...	...	...	...	8
Washington .....	...	1	1	...	...	...	...	...	...	...	...	...	...	5
Wayne	5	1	...	...	...	...	...	...	...	...	...	...	...	7
Totals	384	117	84	71	54	11	10	4	3	2	1	1	1	1,706

TABLE SHOWING THE NUMBER OF VISITS MADE IN EACH DISTRICT DURING THE YEAR.

Counties.	Number of mines visited													Totals.
	once.	twice.	three times.	four times.	five times.	six times.	seven times.	eight times.	nine times.	eleven times.	thirteen times.	eighteen times.	thirty-eight times.	
Number visits..	1	2	3	4	5	6	7	8	9	11	13	18	38	
First district...	16	17	13	13	10	...	2	1	...	...	...	...	...	213
Second district...	34	19	15	12	9	2	...	...	2	1	1	...	1	302
Third district...	150	24	12	14	10	4	5	1	1	1	...	1	...	445
Fourth district...	49	17	10	9	8	...	1	1	...	...	...	...	...	204
Fifth district...	39	16	9	10	8	3	...	1	...	...	...	...	...	204
Sixth district...	47	15	15	7	4	1	...	...	...	...	...	...	...	117
Seventh district...	49	9	10	5	5	1	2	...	...	...	...	...	...	162
Totals	384	117	84	71	54	11	10	4	3	2	1	1	1	1,706

SCALES TESTED.

During the year that has just closed one hundred and thirty-one sets of scales were tested, this being nineteen more than were tested the previous year. These tests were made in the following counties: Stark twenty-four, Tuscarawas eleven, Belmont nine, Guernsey seven, Hocking and Jackson five in each, Carroll and Columbiana four each; Jefferson and Summit three, Lawrence, Coshocton, Mahoning, Meigs, Morgan, Muskingum, Portage and Vinton one each.

Of the one hundred and thirty-one sets of scales that were tested one hundred and fifteen were found accurate, and the number found to deviate from the correct standard was sixteen. Of this number three were found against the miner and one against the operator. Of the number of sets of scales tested, 87 per cent of the entire number were found accurate.

The second table is designed to exhibit the number of scales tested, name of the mine where inspection took place, also date of inspection, inspector performing the test, and the result obtained.

SCALES TESTED AND MINE CARS MEASURED.

ATHENS COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
December 19 December 22 1900.	Daleton No. 1 Oakdale	Luhrig Coal Co. North Star Coal Co.	D. H. Williams. " "	Found accurate. " "
January 31 January 12 February 12 May 2 May 17 July 16 July 30 August 21 September 7 September 24 October 15 October 18 October 18 October 30	No. 10 No. 2 " Minker Run Somers No. 4 No. 6 Minker Run Daleton No. 2 Minker Run Oakdale Somers Wells No. 10	Sunday Creek Coal Co. W. P. Rend & Co. " Hocking Valley Coal Co. Somers Coal Co. W. P. Rend & Co. " Hocking Valley Coal Co. Luhrig Coal Co. Hocking Valley Coal Co. North Star Coal Co. Somers Coal Co. A. H. Wells Sunday Creek Coal Co.	D. H. Williams. "	Found accurate. Found accurate. 40 pounds against the miner. Found accurate. " " " " " " " " " " One-fifth against the miner. Found accurate. " " " "

BELMONT COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.

SCALES TESTED AND MINE CARS MEASURED — Continued.
BELMONT COUNTY — Concluded.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. April 27	Maple Hill	Maple Hill Coal Co.	Thos. McGough	Found correct.
May 1	Boggs	E. N. Boggs.	"	"
May 1	Taggarts	"	"	"
May 17	Kennon No. 1.	Kennon Coal Co.	"	"
May 13	Belmont No. 2.	Long Bros.	"	"
July 26	Crescent	Lorain Coal & Dock Co.	"	"
July 30	Belmont No. 2.	Long Bros.	"	"
September 10	Maple Hill	Maple Hill Coal Co.	"	"

CARROLL COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. April 16	Magnolia	Magnolia Coal Co.	Jas. P. Davis	Found correct.
April 16	Linden No. 6.	Davis Railway Coal Co.	"	"
August 29	Beatty No. 2.	Beatty Fire Clay Co.	"	"
October 16	Davis No. 6.	Sherrodsville Coal Co.	"	"

SCALES TESTED AND MINE CARS MEASURED — Continued.

COLUMBIANA COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900.				
January 23	Quaker Valley	Sterling Coal Co.	Rees T. Davis	Inaccurate.
April 11	Pleasant Valley No. 1.	Powers Mining Co.	"	Found accurate.
May 31	Salem	Salem Coal Co.	"	"
August 10	Lisbon	Lisbon Coal Co.	Jas. P. Davis	"

COSHOCTON COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1899.				
December 19	Wade No. 2.	Wade Coal Co.	Thos. McGough	Found correct.

SCALES TESTED AND MINE CARS MEASURED
GUERNSEY COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
May 10 1900.	Cisco	Opperman Coal Co.....	Thos. McGough	
August 7	Forsythe	Forsythe Coal Co.....	W. H. Turner.....	Found correct after some repairs had been made.
August 7	Kings	Morris & Guild.....	"	40 pounds in favor of company.
August 7	Klondyke	Loomis, Moss & Co.....	"	Found accurate (3 sets).
August 7	Old Orchard	Morris & Guild Coal Co.....	"	"
August 7	Old Orchard No. 1....	Jones & Taylor.....	"	"
September 10	Forsythe	Forsythe Coal Co.....	"	"

HOCKING COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
December 14 1899.	New Pittsburg No. 1..	New Pittsburg Coal Co.....	Samuel Llewellyn	Found incorrect.
February 21 1900.	New Pittsburg No. 6..	New Pittsburg Coal Co.....	Samuel Llewellyn	Found correct.
February 21	New Pittsburg No. 3..	"	"	"
September 27	Beattie Bros	Beattie Bros. Coal Co.....	R. M. Mason.....	Found incorrect.
October 23	New Pittsburg No. 2..	New Pittsburg Coal Co.....	"	"

SCALES TESTED AND MINE CARS MEASURED — Continued.

JACKSON COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. January 27	Globe Shaft	Globe Iron Co.	Samuel Llewellyn	Found accurate.
March 3	Emma No. 2	Emma Coal Co.	"	"
May 17	Hurd's Shaft	Hurd Coal Co.	"	"
August 9	Superior No. 1	Superior Coal Co.	R. M. Mason.	" (2 sets).
October 12	Superior No. 7	"	"	"

JEFFERSON COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. May 28	Dillon No. 2	W. & L. E. Coal Co.	Thos. McGough	Found correct (2 sets).
May 29	Long Run	"	"	"
October 30	Kelley No. 2	Kelley Coal Co.	"	"

SCALES TESTED AND MINE CARS MEASURED — Continued.

LAWRENCE COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. November 7	Hall	John F. Hall Coal Co.	D. H. Williams.	Found accurate.

MAHONING COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1899. November 29	McKinley	Ohio B. & C. Supply Co.	Rees T. Davis.	Found accurate.

MEIGS COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. August 27	Buckeye	Robert Dyke	D. H. Williams.	Cars a fraction under limit of 20 bushels.

SCALES TESTED AND MINE CARS MEASURED — Continued.

MORGAN COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. September 1	Rose	Carding Bros	D. B. Wilson	Found 200 pounds to the ton against the miner.

MUSKINGUM COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. November 8	Granger	Siler Coal Co.	D. B. Wilson	Found correct.

PERRY COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1899. December 1 December 18	Fannie	Taylor, Williams & Co.	D. B. Wilson	Found correct.

SCALES TESTED AND MINE CARS MEASURED — Continued.
PERRY COUNTY — Concluded.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900.				
April 30	Congo No. 1.	Congo Mining Co.	D. B. Wilson.	Found correct (4 sets).
May 5	No. 20	Franklin Fuel Co.	"	"
May 17	Keystone	Zanesville Coal Co.	"	" (4 sets).
June 2	Congo No. 1.	Congo Mining Co.	"	"
June 2	Congo No. 2.	"	"	"
June 2	Congo No. 3.	"	"	"
June 18	Rends No. 2.	W. P. Rend & Co.	"	Found incorrect.
June 18	Furnace No. 2.	E. W. Lewis & Co.	"	Found correct.
November 1	X X	Taylor, Williams & Co.	"	"
November 2	Shawnee Valley	Maynard Bros	"	"

PORTAGE COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900.				
March 7	Hutson No. 4.	Hutson Coal Co.	Rees T. Davis.	Found inaccurate.

SCALES TESTED AND MINE CARS MEASURED — Continued.
STARK COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1899.				
November 24	Elm Run No. 3.....	Elm Run Coal Co.....	Wm. K. Moore.....	Found correct.
November 24	Elm Run No. 4.....	Warwick Coal Co.....	".....	"
November 27	Warwick.....	Central Coal Co.....	".....	"
November 28	Central Mine.....	E. G. Krause & Co.....	".....	"
November 29	Stanwood.....	J. F. Pocock.....	".....	"
December 11	Young's Shaft.....	James Mullins.....	".....	"
December 16	Minglewood No. 4.....	James Mullins.....	".....	"
1900.				
February 5	Drake.....	Drake Coal Co.....	Wm. K. Moore.....	Found correct (2 sets).
February 23	New Greenville.....	Howells Mining Co.....	".....	"
February 23	Warwick No. 1.....	Warwick Coal Co.....	".....	"
March 13	".....	".....	".....	"
March 19	Minglewood No. 4.....	James Mullins.....	".....	"
April 13	Krause No. 3.....	E. G. Krause & Co.....	".....	"
July 3	Eureka.....	Eureka Coal Co.....	W. H. Miller.....	"
July 31	Elm Run No. 3.....	Elm Run Coal Co.....	".....	"
August 7	Elm Run Mine No. 4.....	James Mullins.....	".....	"
August 13	Minglewood No. 4.....	".....	".....	"
August 17	Minglewood No. 2.....	James Mullins.....	".....	"
September 17	Warwick No. 2.....	Warwick Coal Co.....	".....	"
September 17	Central.....	Central Coal Co.....	".....	Found incorrect.
September 17	Warwick No. 1.....	Warwick Coal Co.....	".....	Found correct.
September 27	Drake.....	Drake Coal Co.....	".....	"
October 5	Young's Shaft.....	J. F. Pocock.....	".....	"
November 8	Elm Run No. 3.....	Elm Run Coal Co.....	".....	"

SCALES TESTED AND MINE CARS MEASURED -- Continued.
SUMMIT COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. March 10	Fox Lake	Fox Lake Coal Co.	Rees T. Davis.	Two sets. Large ones inaccurate, small ones accurate.
May 9	Turkey Foot	Brewster Coal Co.	"	Found inaccurate.
August 27	"	"	W. H. Miller.	Found correct.

TUSCARAWAS COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1899. November 17	Newport	Erhard Coal Co.	Wm. K. Moore.	Found correct.
December 20	Shanesville	Shanesville Coal Co.	"	"
1900. April 3	Midvale No. 2.	Midvale-Goshen Coal Co.	Wm. K. Moore.	Found correct.
April 4	East Goshen No. 1.	East Goshen Coal Co.	"	"
April 4	East Goshen No. 2.	"	"	"
April 5	Twin City	Dennison Coal Co.	"	"
April 20	Wainwright No. 4.	Midvale-Goshen Coal Co.	"	"
April 20	Wainwright No. 5.	"	"	"
April 17	Huffs Run	Ridgeway, Burton & Co	"	"
May 19	Buckhorn	Buck Horn Coal Co.	W. H. Turner.	Slow in action, but correct.
June 17	Eagle Hill	Ebenezer Jones	"	Found correct (2 sets).

SCALES TESTED AND MINE CARS MEASURED — Concluded.
VINTON COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. April 23	Star No. 2.....	Star Coal Co.....	Samuel Llewellyn	Found incorrect.

WAYNE COUNTY.

Date.	Name of mine.	Name of owner.	By whom tested.	Result.
1900. August 2 September 10	Billman	Card & Loomis Coal Co.....	W. H. Miller.....	Found correct.

TABLE SHOWING THE NUMBER OF SCALES TESTED AND RESULT OF THE EXAMINATION FROM 1887 TO NOVEMBER 15, 1900.

Years.	Number sets of scales tested.	Number of sets found correct.	Number of sets found incorrect.	Remarks.
1887	74	.....	.....
1888	55	41	14	
1889	48	33	14	
1890	59	46	20	
1891	61	37	25	
1892	86	62	24	8 in favor of company, 6 in favor of miners.
1893	120	81	39	12 in favor of company, 3 in favor of miners.
1894	64	37	27	15 in favor of company, others not known.
1895	96	65	31	15 in favor of company, 14 in favor of miners.
1896	93	65	28	5 against miner, 1 against operator.
1897	77	59	18	3 against miner, 3 against operator.
1898	99	82	17	4 against miner, 1 against operator.
1899	112	93	19	
1900	131	115	16	3 against miner, 1 against operator.
Totals	1,101	.....	.....

PERMANENT IMPROVEMENTS MADE DURING THE YEAR

In order to obtain the best results possible, and to keep the condition of the mines up to the standard required by the mining statutes the department has caused any suggestions tending to improve their condition as reported to this department at various times by the district inspectors to be repeated directly to the companies operating the respective mines. The result obtained by this method has been highly gratifying from the fact that fewer complaints have been received than ever before.

The number of permanent improvements made for the year 1900 is shown to be one hundred and seventy, being thirty less than was made for the year 1899. An accurate comparison of the number of improvements made in the various districts cannot be ascertained owing to change which was made redistricting the state, and shifting counties that were formerly in one district to another. The total number of furnaces built during the year was twenty-four; the number of fans erected twenty-seven; number of air shafts sunk, sixty-nine; the number of second openings made, thirty-one; stairways built, nine; speaking tube inserted, one; and the number of fire baskets used for ventilating purposes was eight.

These various improvements were made under the following district inspectors: Samuel Llewellyn, three; R. M. Mason, seven; D. H. Williams, thirty-one; D. B. Wilson, twenty-four; Thos. McGough, twenty-four; Jas. P. Davis, thirty-eight; Wm. K. Moore, fifteen; Reese T. Davis, seven; and W. H. Miller, six.

TABLE SHOWING THE NUMBER AND CHARACTER OF THE PERMANENT IMPROVEMENTS MADE IN THE MINES OF THE STATE DURING THE INSPECTION YEAR.

Name of district inspector.	Furnaces.	Fans.	Air shafts.	Second openings.	Safety catches.	Stairways.	Speaking tubes.	Ventilating baskets.	Totals.
Llewellyn		1	1	1					3
Mason		6		1					7
Williams	7	2	14			2		6	31
Wilson	2	2	14	5				1	24
McGough	2	6	8	7		1			24
Turner	4		8	1		1	1		15
Jas. P. Davis	7	6	11	11	1	1		1	38
Moore	2	1	6	3		3			15
Rees T. Davis		1	4	2					7
Miller		2	3			1			6
Totals	24	27	69	31	1	9	1	8	170

TABLE SHOWING THE NUMBER AND CHARACTER OF PERMANENT IMPROVEMENTS MADE IN THE MINES OF THE STATE FROM 1884 TO 1900 INCLUSIVE.

Years.	Furnaces.	Fans.	Air shafts.	Second openings.	Safety catches.	Stairways.	Speaking tubes.	Ventilating baskets.	Totals.
1884	43	10							53
1885	45	19	45		13				122
1886	13	6	22	10		12			63
1887	39	9	50	7		8			113
1888	43	4	52	17	13	12			141
1889	42	13	57	21	7	3	3		146
1890	57	20	66	46	8	11	4		212
1891	53	17	55	26	19	19	5		194
1892	37	26	65	27	13	7		2	181
1893	77	35	131	67	16	19	5	4	354
1894	55	18	106	60	7	11	3	9	269
1895	66	17	105	60	9	11	3	13	284
1896	56	21	93	81	5	7	3	14	280
1897	40	22	75	44	4	7	3	9	204
1898	44	17	73	45	7	11	1	15	213
1899	36	25	60	45	11	13	7	3	200
1900	24	27	69	31	1	9	1	8	170
Totals	770	306	1,124	587	133	160	42	77	3,199

**MINES WHICH GENERATE LIGHT CARBURETTED HYDROGEN
(FIRE DAMP).**

ATHENS COUNTY.		
Daleton No. 1 and 2.....	No. 4	No. 16.
Oakdale.....	No. 6	No. 24.
Phoenix No. 2.....	No. 10	Chauncey.
BELMONT COUNTY.		
Captina	Schnegg	
COLUMBIANA COUNTY.		
New Shaft	Lisbon	Pine Hill.
Cedar Hill	Cherry Valley No. 3.....	Salem.
GUERNSEY COUNTY.		
Kings	Walhounding	Trail Run.
Klondike	Cisco	Forsythe.
Imperial	Hartford	Ideal.
Old Orchard	Central	Little Kate.
Black Top		
JACKSON COUNTY.		
Wainwright	Fluhart No. 3.....	Superior No. 6.
JEFFERSON COUNTY.		
High Shaft		
MAHONING COUNTY.		
Greenamyer Shaft		
MEIGS COUNTY.		
Antiquity		
NOBLE COUNTY.		
Glenwood		
STARK COUNTY.		
Minglewood No. 3 and 4...	New Greenville	Massillon M'ng Co. N
Youngs Shaft	Warwick No. 2.....	

MODE OF VENTILATION AND CHARACTER OF DEVELOPMENT.

The following table is designed to indicate the mode of ventilation and character of the opening, and the number and kind of each in use in each of the coal-producing counties of the state. The number of mines employing drifts for an opening is six hundred and ninety-six; the number using shafts, one hundred and twenty-two; while one hundred and forty mines use slope as a means of entrance.

Muskingum county heads the list in the number of drifts, ninety-seven being in use, Perry sixty-eight, Tuscarawas sixty, and Belmont fifty. Counties employing shafts for an opening, heading the list are as follows: Jackson twenty-eight, Stark twenty-five, Mahoning thirteen, Belmont ten. In the number of slopes Stark county heads the list with twenty; Mahoning sixteen, Columbiana twelve, Athens, Jackson and Medina each having eleven in use.

The number of fans in use in the various mines in the state is one hundred and seventy-one; number of furnaces, two hundred and sixty-four; fire baskets, forty-eight; steam jets and exhaust from pumps, thirty-three. Mines employing natural ventilation number four hundred and fifty-three. The number of small mines of which the ventilation is unknown is one hundred and three.

The record for the year 1899 shows the number of drifts in use to be seven hundred and eighty-nine; shafts, one hundred and forty-five, and the number of slopes, one hundred and thirty-three. The number of small mines of which the opening is unknown is sixty-five.

In the use and number of fans Jackson county heads the list with thirty-seven, while Athens has twenty-four, Stark fourteen, and Columbiana and Guernsey counties have each thirteen. The counties showing the largest number of furnaces in operation are as follows: Tuscarawas thirty-six, Belmont thirty-one, Perry twenty-four, Columbiana twenty-one and Muskingum twenty. The number of steam jets in Stark county is nine, Medina seven, and Mahoning five.

The number of fans in use in the year 1899 was one hundred and forty-seven; furnaces, two hundred and seventy-four; fire baskets, forty-one; steam jets and exhaust from pumps, thirty-four. The number employing natural ventilation was five hundred and twenty-three. The number of small mines of which the ventilation was unknown, one hundred and seven.

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION AND THE THREE KINDS OF OPENINGS.

Counties.	Character of opening.					Mode of Ventilation.						
	Drift.	Shaft.	Slope.	Small mines, kind of Opening unknown.	Totals.	Fan.	Furnace.	Fire basket.	Steam jet and exhaust from pumps.	Natural.	Small mines, method of ventilation unknown.	Totals.
Athens	28	10	11	5	54	24	7	9	1	10	3	
Belmont	50	2	7	6	65	9	31	1	1	18	5	
Carroll	16	2	3	1	22	1	7	1	1	11	1	
Columbiana	46	5	12	2	65	13	21	1	1	27	2	
Coshocton	22			1	23		15	2		4	2	
Gallia	4			3	7		3			1	3	
Guernsey	13	11	4	2	30	13	3	1	2	9	2	
Harrison	45	1	6	2	54		4	4		44	2	
Holmes	10		1		11		4			7		
Hocking	14		1	5	20	12	3	1		1	3	
Jackson	30	28	11	13	82	37	13	4		17	11	
Jefferson	40	5	5	5	55	10	15	1		23	6	
Lawrence	19			5	24		6	1		15	2	
Mahoning	8	13	16	2	39	5	9	1	5	17	2	
Medina		1	11		12		3	1	7	1		
Meigs	27	1	1	4	33	4	5	1		20	3	
Morgan	1		1		2	2						
Monroe	3	1		1	5	1	1			3		
Muskingum	97	1	6	14	118	1	20	4		79	14	
Noble	43	1	1	3	48	1	3			42	2	
Perry	68	6	5	11	90	11	24	9	2	33	11	
Portage		3		1	4	3					1	
Scioto	7				7	2				5		
Stark	26	25	20	9	80	14	19	3	9	24	11	
Summit	5	3	4	1	13	2	2		1	7	1	
Trumbull	1	2	4		7	1	2		1	3		
Tuscarawas	60		6	11	77	5	36	2		24	10	
Vinton	10		1	6	17		4	1		7	5	
Washington			2		2		2					
Wayne	3	1	1	1	6		2		2	1	1	
Totals	696	122	140	114	1,072	171	264	48	33	453	103	1,

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION AND THE THREE KINDS OF OPENINGS FROM 1892 TO 1900 INCLUSIVE.

Years.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Drifts	303	676	657	749	821	800	921	789	696
Shafts	91	121	149	150	149	153	143	145	122
Slopes	40	61	61	68	66	85	145	133	140
Small mines, kinds of openings not known	458	151	296	220	167	190	46	65	114
Totals	892	1,009	1,163	1,187	1,203	1,228	1,255	1,132	1,072
Fans	127	141	139	134	134	149	149	147	171
Furnaces	253	323	264	278	281	280	317	274	264
Fire basket	11	23	32	36	38	51	45	41	48
Steam jet and exhaust from pumps	30	39	43	48	52	49	47	34	33
Natural	205	316	378	452	528	516	636	523	453
Small mines, mode of ventilat'n not known	266	167	309	242	179	200	73	107	103
Totals	892	1,009	1,165	1,190	1,212	1,245	1,267	1,126	1,072

POWDER CONSUMED IN THE MINING OF COAL.

The following table is designed to show the amount of powder consumed in the mining of coal in the various coal producing counties of the state, amount of coal mined to the keg, number of firms reporting and the number of companies failing to send in returns. Upon examination of same we find the number of firms making returns for the year 1900 to be four hundred and thirty-four, a decrease of eighty-five as compared with the preceding year. The number of firms failing to make returns for the year 1900 was three hundred and forty-six, forty-three less than the number failing to report in the year 1899. The number of tons of coal mined by the use of powder in the year 1900 was 15,873,365 while in the year 1899 the amount is shown to be 3,110,211 tons less. The number of kegs of powder used in 1900 was 262,153, as compared with 212,996 as consumed in the year 1899, being 81.6 of the entire coal production for the year.

In order to protect the lives of the men who delve in the mines for a livelihood the department has found it necessary in several instances to issue orders prohibiting the storing of powder magazines in the mines.

TABLE SHOWING THE AMOUNT OF POWDER CONSUMED IN THE MINES OF THE STATE AND THE NUMBER OF TONS OF COAL PRODUCED TO THE KEG.

Counties.	Number of firms which reported.	Number of firms which did not report.	Tons mined by firms which reported.	Number of kegs reported as used.	Number of tons mined to kegs of powder used.
Athens	31	8	2,114,608	21,717	98
Belmont	32	24	1,084,897	7,692	141
Carroll	15	4	203,913	5,925	35
Columbiana	38	17	674,186	7,621	88
Coshocton	9	9	234,052	2,516	93
Gallia	3	.....	16,138	149	109
Guernsey	16	7	1,806,172	11,527	157
Harrison	12	40	12,324	181	68
Holmes	6	5	10,004	38	342
Hocking	6	3	904,540	7,286	124
Jackson	49	6	2,312,770	81,711	28
Jefferson	18	26	834,865	4,523	186
Lawrence	16	5	77,093	1,747	44
Mahoning	12	24	33,179	381	87
Medina	10	.....	152,767	5,293	29
Meigs	25	3	228,162	3,066	71
Morgan	2	.....	29,954	400	75
Monroe	1	3	2,496	50	50
Muskingum	39	64	189,633	3,960	51
Noble	28	19	80,273	598	134
Perry	39	32	2,147,793	24,216	88
Portage	1	.....	103,241	3,522	29
Scioto	5	2	8,560	266	32
Stark	42	22	1,104,685	38,013	29
Summit	11	1	121,488	4,565	25
Trumbull	5	2	17,963	403	44
Tuscarawas	50	12	1,246,682	21,582	58
Vinton	7	6	74,931	1,702	44
Washington	1	1	680	6	113
Wayne	5	1	45,316	1,497	30
Totals	434	346	15,873,365	262,153	60 7/13

DOCKING AND DEAD WORK SCALE ADOPTED AT
CORNING, OHIO, ON APRIL 24, 1900, FOR SUB-
DISTRICT NO. 1 OF DISTRICT NO. 6, U.-M.
W. OF A., TO BE IN EFFECT FROM
APRIL 1, 1900.

DOCKING SYSTEM.

For less than 150 pounds of dirt no dock shall be made.

For 150 pounds of dirt, 350 pounds of good coal shall be taken.

For 300 pounds of dirt, 700 pounds of good coal shall be taken.

And for the third dock on the same man on the same day, 1,500 pounds of good coal shall be taken, and if the man is found to have an average place by committee and mine boss he shall be laid off one day or more at the discretion of the mine boss and committee.

All good coal docked to be placed in miners' fund, and weigh offices to be so arranged that the check weighman can see chutes and railroad car. Where there is any dispute as to amount of dirt, the same shall be weighed.

TURNS.

There shall be no free turns allowed to either room or entries. The entries shall be driven as fast as Operators desire or conditions permit; but in no case shall entry miners be allowed more cars per week than room miners, and at least once each week the turn shall be made uniform throughout the mine for the time previously worked. If, however, the regular turn will not allow cars enough to drive the entries as fast as desired, the Operators shall increase the number of miners in each entry, so that, by giving to each the regular turn, the entries shall be driven as fast as two miners could do with full work.

If, however, the room men decline to take their place in the entries when requested to do so by the Operator, then the entry men shall have free turns until the entries are driven their required length.

LIMIT ON MINE CARS.

No limit of weight shall be placed on loading mine cars; and in case of loss in transit the company shall not be held responsible; but the car shall not be loaded higher than the roof permits. If a wreck occurs the average weight shall be made good by the company.

CHECK OFF.

The check-off system remains in force and must be observed by companies that do not already recognize it. Same to be checked off by per cent. of earnings.

CLAY VEINS.

Where clay veins, rolls in bottom, or horse backs exist, the price for removing same shall be determined between loader, mine boss and mine committee.

SPRAGS, ETC.

All machines shall be fitted with front shoe, not to exceed $2\frac{1}{2}$ inches in thickness, and the machine men be required to cut coal level and close to bottom, and in no case shall thickness of bottom exceed four inches, except in case of pots or other extreme variations; and all machine men leaving more bottom than above must lift the same or it shall be lifted at their expense. And in case of sprags being left by a machine man, he shall be notified by loader, and if he refuse to remove the same, that the loader may remove the same and be allowed 50 cents for so doing. Said 50 cents to be deducted from machine runner. And where any machine runner leaves six or more sprags in any one pay, he shall be removed from machine and his services disposed of as deemed best by the general superintendent.

ROOMS.

All rooms shall be thirty feet wide with two tracks in each room, where practicable. Where rooms have to be cut twenty-four feet wide or under to eighteen feet, same shall be paid three cents per ton extra. Not to effect pillars or entries.

BLACKSMITHING.

Machine loaders are not to be charged for blacksmithing.
Each two men shall be given two rooms where practicable.

PICK MINE NECKS.

In opening rooms in pick mines, where narrow work exceeds eighteen feet before widening room, all in excess of eighteen feet shall be paid for at entry price.

WET PLACES.

Where the mine boss and miner fail to agree as to whether the working place is wet and entitled to extra pay, it shall be referred to the committee and mine boss or superintendent, and, if adjudged wet, three cents per ton additional shall be paid.

MINE IDLE ON ACCOUNT OF IDLE MEN.

Where there are four men out of cutting or drilling, working after same machine or drill, when work is commenced in the morning and the same is not caused by accident, the mine shall remain idle that day.

SLATE.

The company shall remove the slate from the working places of mine; and if the company fail after being notified, the miner shall be employed to remove such slate and be paid therefor at the price agreed upon between the mine boss and the miner, based on the price of a day's labor.

DOUBLE SHIFT ENTRY.

Twenty-five cents per yard extra shall be paid for driving double shift entries.

STOPS.

No stoppage shall take place at any mine on account of any grievance until the matter has been presented to the mine boss and superintendent and an opportunity for adjustment permitted; and, failing to adjust, the matter be referred to the officials and operators.

Signed on behalf of

Operators.

J. S. MORTON,
C. C. SHARP,
T. E. TETRICK,
E. A. COLE,
V. FERGUSON.

Miners.

CONRAD WEIN,
JAMES HARDY,
JOSEPH RICHARDS.

DETAILED MINING SCALE FOR HOCKING COUNTY,

the Basing District of Ohio, effective during the Scale Year, from April 1, 1900, to April 1, 1901, as adjusted and fixed by and between the Ohio State Officials U. M. W. of A. and the Operators of the said District by their duly authorized representatives, at Columbus, Ohio, on Tuesday, February 20, 1900.

Based upon the general scale adopted at the Inter State Convention held at the city of Indianapolis, Indiana, on February 2, 1900, IT IS HEREBY CONVEN-
ATED AND AGREED that during the ensuing Scale Year, viz., from April 1, 1900, to April 1, 1901, the rates for labor to be paid at the mines of the Hocking District shall be as follows:

PICK MINING RATE per ton of Screened Lump Coal.....	\$.80
Run of Mine, 5/7 lump price.....	.57 1/7
ENTRIES: Dry entries, per yard.....	2.00
Break-throughs in entries.....	2.00
Break-throughs in rooms.....	1.39
Room Turning	3.03
Timber Men, per day.....	2.28
Track Layers, per day.....	2.28
Track Layers' Helpers, per day.....	2.10
Pipe Men, per day.....	2.22
Trappers, per day.....	1.00
Cagers, Drivers, Machine haulers, Water haulers and all other inside day labor, per day.....	2.10
Dumpers and Trimmers, per day.....	2.10
Couplers, Greasers, Slack haulers, Firemen, Engineers, Carpenters, Blacksmiths, Cleaners, Hostlers, and other outside day labor. }	Special prices according to nature of work.

MACHINE.

Cutting, by Jeffrey styles of machine, in ROOMS, per ton.....	\$.09
Cutting, by Jeffrey styles of machine, in ENTRIES.....	.12½
Cutting, by punching machine, in ROOMS.....	.13½
Cutting, by punching machine, in ENTRIES.....	.14½
Loading, in ROOMS, per ton.....	.41
Loading, in ROOMS, with hand drilling, per ton.....	.44
Loading, in ENTRIES.....	.51½
Loading, in ENTRIES, with hand drilling.....	.54½
Loading, Break-throughs in entries.....	Entry Price
Loading, Break-throughs in rooms.....	\$.48½
Loading, Break-throughs in rooms, with hand drilling.....	.51½
Drilling by hand.....	.03
Drilling by machine.....	.02½
Room Turning, Cutter and Loader.....	Entry Price

Signed in behalf of

Operators:

E. A. COE.
V. FERGUSON,
T. E. TETIRICK,
J. S. MORTON,

Miners:

W. H. HASKINS, *Pres.*
D. H. SULLIVAN, *Vice Pres.*
CONRAD WEIN, *Board Member.*
JAMES HARDY, *Sub. Dist. Pres.*
WM. SIMONS, *Dist. Vice Pres.*
JOSEPH RICHARDS, *Dist. Sec'y.*

Attest:

F. S. BROOKS, *Sec'y.*

A further meeting is to be held for the consideration of other matters for mutual benefit.

F. S. BROOKS, *Sec'y.*

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT.

Name of inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time Served.	Remarks.
<i>Chief Inspectors.</i>						
Andrew Roy	Trumbull	Wm. Allen, D.	April 5, 1874	April 6, 1878	4 years	Resigned.
Jas. D. Poston, D.	Hocking	R. M. Bishop, D.	April 6, 1878	Nov. 15, 1879	1 yr., 7 mos.	Not confirm. by Senate.
David Owens, D.	Trumbull	"	Nov. 16, 1879	Feb. 12, 1880	3 mos.	
Andrew Roy, R.	Jackson	Chas. Foster, R.	Feb. 12, 1880	Feb. 16, 1884	4 years	Resigned.
Thos. B. Bancroft, D.	Gallia	Geo. Hoadley, D.	Feb. 16, 1884	April 1, 1888	4 yrs., 1½ mo.	
Robt. M. Haseltine, R.	Mahoning	Joseph B. Foraker, R.	April 1, 1878	Apr. 30, 1888	1 month	Reappointed.
"	"	"	May 1, 1888	Apr. 30, 1892	4 years	Reappointed.
"	"	Wm. McKinley, Jr. R.	May 1, 1892	Apr. 30, 1900	4 years	Incumbent.
"	"	Asa S. Bushnell, R.	May 1, 1896	Apr. 30, 1900	4 years	
Elmer G. Biddison, R.	Athens	Geo. K. Nash, R.	May 1, 1900	Apr. 30, 1904	.....
<i>District Inspectors.</i>						
Jacob J. Klein, R.	Stark	Chas. Foster, R.	June 4, 1881	Jan. 26, 1883	2 yrs., 7½ mos.	Resigned.
John F. Williams, R.	Trumbull	"	Jan. 26, 1883	Feb. 16, 1884	1 yr., 21 dys.	
Austin P. King, Jr. D.	Columbiana	Geo. Hoadley, D.	Feb. 16, 1884	Apr. 30, 1886	2 yrs., 2½ mo.	Resigned.
Wm. Dalrymple, D.	Athens	"	May 1, 1884	Mar. 1, 1888	3 yrs., 10 mo.	Resigned. held over as no appointment was made at expiration of term, May 1, 1887.
Wm. A. Davis, D.	Guernsey	Geo. Hoadley, D.	May 1, 1884	Feb. 15, 1886	1 yr., 9½ mos.	Resigned.
Joseph L. Morris, R.	Coshocton	Joseph B. Foraker, R.	Feb. 15, 1886	June 1, 1889	3 yrs., 2½ mo.	Resigned.
D. J. Harry, R.	Jackson	"	April 1, 1888	Apr. 30, 1888	1 month	Reappointed.
"	"	"	May 1, 1888	Apr. 30, 1891	3 years	
David E. Evans, R.	Meigs	"	May 1, 1888	Apr. 30, 1891	3 years	
Jas. W. Haughee, R.	Athens	"	May 1, 1888	Apr. 30, 1891	3 years	
D. J. Harry, R.	"	"	May 1, 1888	Apr. 30, 1891	3 years	

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT - Continued.

Name of inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time Served.	Remarks.
<i>District Inspectors — Continued.</i>						
Thos. H. Love, R.....	Carroll	Joseph B. Foraker, R. R.....	June 1, 1889	Aug. 1, 1891	2 yrs., 2 mos.	Reappointed.
"	Carroll	Wm. McKinley, Jr. R. R.....	July 15, 1892	Apr. 30, 1894	1 y. 9 m. 15 d.	Reappointed.
"	"	"	May 1, 1894	Feb. 15, 1898	3 yrs., 9½ mo.	Resigned.
Wm. B. Rennie, D.....	Tuscarawas	Jas. E. Campbell, D. D.....	Aug. 1, 1891	July 15, 1892	11 mo., 15 d.	Resigned.
Jno. E. Short, D.....	Hocking	"	May 1, 1891	May 7, 1894	3 yrs., 7 dys.	Resigned.
Adam P. McDonald, D.....	Perry	"	May 1, 1891	July 15, 1892	1 yr., 2½ mos.	To take effect July 15, before entering on his duties.
Wm. H. Turner, D.....	Guernsey	"	May 1, 1891	Apr. 30, 1894	3 yrs.	Reappointed.
Jas. W. Haughee, R.....	Athens	Wm. McKinley, R. R.....	June 17, 1892	June 28, 1892	Apptd, resg'd	Reappointed.
Robt. H. Miller, R.....	Perry	Wm. McKinley, R. R.....	July 15, 1892	Apr. 30, 1894	1 yr., 9½ mos.	Reappointed.
Alander Beattie, R.....	Athens	"	May 1, 1894	July 13, 1898	4 yrs., 2½ mo.	Reappointed.
Jno. P. Jones, R.....	"	"	July 15, 1892	July 15, 1895	3 yrs.	Reappointed.
Saml. Llewellyn, R.....	Stark	"	July 15, 1895	July 15, 1898	3 yrs.	Reappointed.
"	Jackson	"	July 15, 1895	Dec. 31, 1897	2 yrs., 5½ mo.	Resigned.
Thos. McGough	Belmont	Asa S. Bushnell, R. R.....	May 9, 1894	May 21, 1897	3 yrs., 12 da.	Reappointed.
"	"	Wm. McKinley	May 21, 1897	May 19, 1900	2 y. 11 m. 28 d.	Reappointed.
Rees T. Davis.....	"	Asa S. Bushnell	May 1, 1894	Apr. 30, 1897	3 years	Reappointed.
Wm. K. Moore.....	Columbiana	Geo. K. Nash.....	June 1, 1900	Apr. 30, 1903	3 yrs. 1 mo.	Incumbent.
"	"	Wm. McKinley	May 1, 1894	Apr. 30, 1897	3 years	Reappointed.
Jas. P. Davis.....	Stark	Asa S. Bushnell	Jan. 17, 1898	July 15, 1898	6 months	Reappointed.
Lucius W. Hull.....	Carroll	"	Feb. 15, 1898	Apr. 30, 1900	1 y. 10 m. 15 d.	Resigned.
David B. Wilson.....	Athens	"	July 15, 1898	July 15, 1899	1 year	Incumbent.
David H. Williams.....	Perry	Geo. K. Nash.....	July 15, 1898	June 1, 1900	1 y. 10 m. 15 d.	Resigned.
"	"	"	June 1, 1900	Apr. 30, 1903	2 y. 10 m. 29 d.	Reappointed.
"	Athens	Asa S. Bushnell	July 15, 1899	July 15, 1901	2 years	Reappointed.

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT — Concluded.

Name of inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>District Inspectors —</i>						
Concluded.						
R. M. Mason.....	Hocking	Geo. K. Nash.....	May 21, 1900	Apr. 30, 1903	2 y. 11 m. 9 d.	Incumbent.
Wm. H. Turner.....	Guernsey	Geo. "	June 1, 1900	Apr. 30, 1903	2 y. 10 m. 29 d.	Incumbent.
Wm. H. Miller.....	Stark	"	June 1, 1900	July 15, 1901	1 yr., 14 dys.	Incumbent.

MINE MAPS.

The mining laws require that the owner or operator of any mine having an excavation of fifteen thousand cubic yards shall furnish a map of same to be placed on file for future reference in the records of this department which shall be extended at least once a year showing the workings and progress made in mining during the year.

Mine owners have originally been very careless and negligent in fulfilling the requirements of the mining statutes relating to the filing of maps, but the year 1900 shows more maps to have been placed on file than any previous year with the exception of 1897 when one hundred and seventy-eight maps were filed with one hundred and seventy-seven in the year 1900.

At the end of the year 1900, there were on file nine hundred and eight mine maps as a result of the most untiring efforts on the part of the department to secure these records. However it is gratifying to observe that the companies are becoming more ready to respond to this request, as is evidenced by the promptness in which these maps are forwarded.

TABLE DESIGNED TO EXHIBIT THE NUMBER OF MAPS THAT HAVE BEEN FILED AS THEY OCCUR IN EACH COUNTY IN THE STATE FROM 1874 TO 1900 INCLUSIVE.

Counties.	Maps Filed.							Total Number
	Prior to 1884.	Prior to 1888.	Prior to 1897.	During 1897.	During 1898.	During 1899.	During 1900.	
Athens	10		28	23	10	20	13	
Belmont	6		8	17	10	6	13	
Carroll		2	5		6	2	2	
Columbiana	12	1	8	23	6	3	9	
Coshocton			3	5	4	1	4	
Gallia				1				
Guernsey	2		4	7	1	10	13	
Harrison				1	1			
Holmes								
Hocking	1	3	12	8	3	5	2	
Jackson	1		8	15	22	17	17	
Jefferson	2		7	10	1	11	10	
Lawrence	3		4	2	2		7	
Mahoning	4		13	7	2	4		
Medina	1	2	5	1	3	3	6	
Meigs	6		8	6			5	
Morgan			1	1		1		
Monroe								
Muskingum			4	6	7	6	6	
Noble		1			1			
Perry	10		17	18	13	35	20	
Portage			4		1	4	3	
Scioto				1	1			
Stark	7		21	11	15	10	21	
Summit	3	1	7	2		1	1	
Trumbull	10	1	10	2				
Tuscarawas	1	1	10	6	7	10	20	
Vinton	2			2		1	2	
Washington							1	
Wayne	1		1	3	3	2	2	
Totals	82	12	188	178	119	152	177	

SEALING OF OIL AND GAS WELLS.

Section 5 of an act passed by the Seventy-third General Assembly of Ohio, April 23, 1898, provides: That the owner, agent or lessee of any land upon which there has been drilled any oil or gas well which has penetrated any vein of coal shall, before abandoning or ceasing to operate, or removing the casing from such well, give due notice in writing to the chief inspector of mines of such fact and designating therein the well to be abandoned; and it shall thereupon be the duty of such inspector of mines, or of any district inspector to go at once to such well, and require the owner or agent of the land, or the owner, agent or lessee of such well, to plug the well as provided by this act.

During the year 1899 the mining department undertook to enforce this act, but met with the opposition which commonly occurs in enforcing most new laws. There was no provision made to meet the expense thus thrust upon the department, and owing to the increased activity of the mining industry the time of the district mine inspector was so taken up with the real duties of his office that there was little or no time at his disposal for additional labor entailed by this act. The above fact being apparent to Hon. R. M. Haseltine, who was at that time chief of the department, a revision of section 5 of the above mentioned act was advised.

Senate bill No. 287 passed April 14, 1900, was amended to read as follows: In case such well is not plugged in the manner required by law within ten days after the time the chief or district inspector shall have ordered the same done, the chief or district inspector may cause the well to be plugged, and the costs and expenses of such plugging may be recovered of the person, firm or corporation whose duty it is to seal the same, in the manner provided for the recovery of penalty by section 6 of this act.

Section 5a. It shall be the duty of every person, firm or corporation before attempting to drill any gas or oil well upon any land underlaid with mineral stone coal, first to make application to chief inspector of mines for license therefor, upon blanks to be furnished by him, granting to such person, firm or corporation, the right to drill such gas, oil well, or wells. Said application must contain an accurate description of the lot or land upon which said gas or oil well is to be drilled, together with such other information and descriptive matter as the chief inspector of mines may require; and for purposes such inspector is hereby authorized and empowered to prepare or cause to be prepared such blanks and forms as he may consider necessary to subserve the purposes of this act.

Section 5b. Upon such application being made and signed by the person, firm or corporation desiring such license and the payment of a fee therefor, hereinafter designated, it shall be the duty of such inspector of mines to issue to such person, firm or corporation, for each and every well so to be drilled, a license granting to them the right to drill such

well upon the lot or land so described in such application. Such person, firm or corporation, shall pay to such inspector of mines for each license herein provided for, the sum of five dollars, which sum shall be paid to such chief inspector of mines and by him paid to the treasurer of state to be credited to a fund, a sufficient amount of which is hereby appropriated for the purpose of defraying the expenses of the inspector of oil and gas wells for the sealing of abandoned oil and gas wells in the manner set forth in the several sections of this act.

Section 5c. When in the opinion of the chief inspector of mines, it becomes necessary, he may appoint a suitable person or persons to attend upon and witness the plugging and sealing of abandoned gas and oil wells as provided in this act. A person, firm or corporation desiring to abandon any oil or gas well shall notify said chief inspector of mines or other person appointed by him for such purpose of such desire and of the time when said well will be plugged and sealed. It shall then be the duty of such inspector of mines or other person appointed by him as provided herein upon receipt of reasonable notice to attend upon and witness the sealing of such well. The person witnessing the sealing of such well shall immediately make report to the chief inspector of mines on blanks provided therefor giving the date, manner of sealing, names of persons engaged therein, together with the witnesses present at the time of said sealing, and such other information as the chief inspector of mines may require.

Section 5d. Such person so appointed to witness the plugging and sealing of abandoned wells for his service shall receive the sum of one dollar and his actual expenses in connection therewith, to be paid out of the fund herein provided, upon a requisition signed by the chief inspector of mines.

Section 5e. The chief inspector of mines shall keep a record in his office in which shall be entered a copy of each application for a license, together with the date of issue of such license and to whom issued; also the date when each well was abandoned and sealed, and the names of the persons witnessing such sealing. Section 6 and 7 remain unchanged.

The department at once undertook to enforce this act but met with determined opposition from those engaged in drilling for oil in some parts of the state. After using all efforts to enforce the law that all engaged in the business might be treated alike by the state, we ascertained that there was still one portion of the state which refused to comply with the provisions of the act. Thereupon proceedings were instituted to force a general compliance resulting in a case now pending in the Supreme Court of the State of Ohio, to test the constitutionality of the act, and we hope to be able in our next annual report to give full particulars of the case.

Oil wells to the number of two hundred and thirty-seven were drilled in the year 1900 in the following counties: Athens eleven, Belmont ten, Columbiana one, Carroll five, Harrison one hundred and forty-four, Jef-

ferson twenty-three, Morgan three, Noble one, Perry twenty-nine, Stark one, Tuscarawas three, Vinton three, and Washington three. These wells were sealed by the following district mine inspectors and two assistants as follows: James P. Davis, eighty-six; Thomas McGough, thirty-seven; Wm. K. Moore, two; D. B. Wilson, thirty-one; D. H. Williams, twelve; C. L. Bean, four; and H. C. Kraft, sixty-one. Four were sealed by miscellaneous persons.

The following table is an itemized list of the number of firms complying with the requirements of this act, and the number of licenses granted together with a statement of the funds accruing from said licenses, and the disbursements.

G. E. Foster, Marietta, Ohio, two (2) licenses.....	\$10 00
Brown Bros & Fitzer, Scio, Ohio, one (1) license.....	5 00
A. V. Ryder & Co., Harlem Springs, Ohio, one (1) license.....	5 00
J. W. Scott, Amesville, Ohio, one (1) license.....	5 00
Fisher Oil Co., Pittsburg, Pa., two (2) licenses.....	10 00
Belmont Oil & Gas Co., East Liverpool, Ohio, one (1) license.....	5 00
S. C. Hoyt, Cambridge, Ohio, one (1) license.....	5 00
Athens Oil Co., Athens, Ohio, two (2) licenses.....	10 00
John Roy, Manilla, Ohio, one (1) license.....	5 00
Stear Oil Co., Glouster, Ohio, one (1) license.....	5 00
Colonial Oil Co., Glouster, Ohio, two (2) licenses.....	10 00
Gramlick Oil Co., Macksburg, Ohio, one (1) license.....	5 00
M. O. Marchand, Alliance, Ohio, one (1) license.....	5 00
Milton Stewart, S. S. Bryan, E. R. Young, B. F. Shamburg, Marietta, Ohio	5 00
Denman & Thompson, Corning, Ohio, (five (5) licenses.....	25 00
A. J. Frame, Athens, Ohio, one (1) license.....	5 00
C. S. Blakeslee, Macksburg, Ohio, one (1) license.....	5 00
Bricker Oil Co., Cadiz, Ohio, two (2) licenses.....	10 00
Seneca Oil & Gas Co., Senecaville, Ohio, one (1) license.....	5 00
Rathbone & Hughes, Barnesville, Ohio, two (2) licenses.....	10 00
St. Clairsville Oil & Gas Co., St. Clairsville, Ohio, one (1) license.....	5 00
Columbia Drilling Co., Pittsburg, Pa., two (2) licenses.....	10 00
Hutchinson Bros. Oil Co., Dexter City, Ohio, one (1) license.....	5 00
Dexter City Oil Co., Dexter City, Ohio, one (1) license.....	5 00
Thomas Tait Oil & Gas Co., Glouster, Ohio, six (6) licenses.....	30 00
H. H. Church Oil Co., Glouster, Ohio, five (5) licenses.....	25 00
Southern Oil Co., Woodsfield, Ohio, one (1) license.....	5 00
J. F. Wilson Oil Co., Cadiz, Ohio, three (3) licenses.....	15 00
Veach & Schmick, Bowerstown, Ohio, seven (7) licenses.....	35 00
United States Oil Co., Parkersburg, W. Va., five (5) licenses.....	25 00
Hogg & Glover Oil and Gas Co., Cadiz, Ohio, one (1) license.....	5 00
Petersburg Oil & Gas Co., Algonquin, Ohio, one (1) license.....	5 00
New York Oil & Gas Co., Cadiz, Ohio, one (1) license.....	5 00
W. D. Black, Barnesville, Ohio, two (2) licenses.....	10 00
F. N. Donaldson, Scio, Ohio, sixteen (16) licenses.....	80 00
Federal Oil Co. and Weart & McCauley, Parkersburg, W. Va., four (4) licenses	20 00
Dague & Donaldson, Scio, Ohio, one (1) license.....	5 00
R. W. Bess & Co., Corning, Ohio, ten (10) licenses.....	50 00

Jno. S. Dunn & Co., Dexter City, Ohio, five (5) licenses.....	25 00
Great Northern Oil Co., Akron, Ohio, one (1) license.....	5 00
United Gas Co., Cambridge, Ohio, five (5) licenses.....	25 00
Chapman, Barnesdall & Co., Corry, Pa., one (1) license.....	5 00
Guernsey Brick & Construction Co., Cambridge, Ohio, one (1) license....	5 00
Consolidated Oil Co., Pittsburg, Pa., one (1) license.....	5 00
Rowley, Amsler & Co., Pittsburg, Pa., two (2) licenses.....	10 00
Snyder & Coldren, Corning, Ohio three (3) licenses.....	15 00
Bell, Moor & Sturgeon, Jewett, Ohio, two (2) licenses.....	10 00
R. G. Gillespie, Pittsburg, Pa., sixteen (16) licenses.....	80 00
Harrison Oil & Gas Co., Smithfield, Ohio, one (1) license.....	5 00
Mooney Oil & Gas Co., Bowerstown, Ohio, five (5) licenses.....	25 00
N. Y. Petroleum Co., New York, nine (9) licenses.....	45 00
Highland Oil Co., Pittsburg, Pa., one (1) license.....	5 00
H. C. Porterfield, Marietta, Ohio, one (1) license.....	5 00
Le Comte, Bruner, Stewart & Co., Scio, Ohio, one (1) license.....	5 00
Mildren, Cottrell & Co., Pittsburg, Pa., one (1) license.....	5 00
Wier & O'Connor, Corning, Ohio, one (1) license.....	5 00
American Oil Co., Moundsville, W. Va., one (1) license.....	5 00
E. H. Jennings & Bro., Pittsburg, Pa., two (2) licenses.....	10 00
Cambridge Light & Fuel Co., Cambridge, Ohio, six (6) licenses.....	35 00
Ohio Oil Co., Findlay, Ohio, seventeen (17) licenses.....	85 00
Nassau Oil Co., Scio, Ohio, three (3) licenses.....	15 00
Frank H. Ross, Brooklyn, N. Y., one (1) license.....	5 00
Sherrods Oil & Gas Co., Sherrods, Ohio, one (1) license.....	5 00
Alliance, Eureka Oil & Gas Co., Alliance, Ohio, two (2) licenses.....	10 00
D. R. Phillips & Co., Bowerstown, Ohio, two (2) licenses.....	10 00
C. C. McCormick & Jas. McCoach, Sistersville, W. Va., one (1) license...	5 00
H. S. Glenn, Oakmont, Pa., one (1) license.....	5 00
Robert E. Brown & E. W. Rolfe, Pittsburg, Pa., one (1) license.....	5 00
McIntyre Oil & Gas Co., Mingo Junction, Ohio, one (1) license.....	5 00

Total	\$550 00
Balance brought forward.....	415 00
Total amount received.....	\$965 00

DISBURSEMENTS OF THE OIL AND GAS FUNDS.

July 11th. Clerk hire.....	\$20 00
July 31st. C. L. Bean, for services (sealing oil wells).....	151 05
July 31st. Clerk hire.....	50 00
August 3d. H. C. Kraft, for services (sealing oil wells).....	62 50
September 10th. H. C. Kraft, for services (sealing oil wells).....	89 05
September 10th. C. L. Bean, for services (sealing oil wells).....	229 15
September 10th. Clerk hire.....	50 00
October 1st. C. L. Bean, for services (sealing oil wells).....	69 10
October 1st. Clerk hire.....	50 00
November 22d. Clerk hire.....	50 00
December 1st. Clerk hire.....	50 00
December 22d. Clerk hire.....	25 00
December 31st. Clerk hire.....	25 00

Total	\$920 85
Total amount received from licenses.....	\$965 00
Disbursements	920 85
Balance, January 1st, 1901.....	\$44 15

REPORT OF THE FIRE CLAY INDUSTRY DURING 1900.

The fire clay industry has, for the past two years, been on the increase, and the year 1900 opens up with a marked tendency for greater prosperity, and at the close of the year is steadily making gains until the year 1901 promises to be still greater. In the year 1899 the tonnage amounted to 1,173,697 tons; in the year 1900, the returns are shown to be 1,473,088 tons, an increase of nearly 300,000 tons or about 27 percent.

The average time worked in 1899 was 162 days; that of 1900, 173, a gain of 11 days over that of 1899. The number of men employed in 1899 was 688, while the number so employed in 1900 was 829, a gain of 141 men over that of the previous year.

A steady increase is evident in the number of firms engaged in manufacturing; in the year 1899 there were 3,043 hands engaged in the manufacture of fire clay, while the number so engaged in 1900 is 3,815, a gain of 772 hands. Of the nineteen counties making net returns, twelve show gains, and seven losses. The greatest amount of fire clay was produced in Stark county, being an amount of 292,124 tons; a gain of 97,109 tons as compared with the year 1899; this county is followed by Columbiana, showing a gain of 85,525; Jefferson county, 84,305 tons, and Tuscarawas county, 60,445 tons. The greatest loss was in Perry county the amount being 49,602; Summit county, 32,815 tons; the remaining counties show a small loss in the production. The fire clay purchased for the year 1900 aggregated 13,088 tons, distributed in the following counties: Holmes, Jackson, Muskingum, Scioto and Summit.

TABLE SHOWING FIRE CLAY OUTPUT OF THE STATE DURING THE YEAR 1900 AS COMPARED WITH THE YEAR 1899.

Counties.	1889.				1900.				Employees.				Output.																			
	No. of Days Worked.		No. of Men Employed.		No. of Hands Engaged in Manufacture.		No. of Tons Mined.		No. of Tons Purchased for Manufacturing Wares.		No. of Days Worked.		No. of Men Employed.		No. of Hands Engaged in Manufacture.		No. of Tons Mined.		No. of Tons Purchased for Manufacturing Wares.		Gain in Miners.		Loss in Miners.		Gain in Hands Employed in Manufacture.		Loss in Hands Employed in Manufacture.		Gain in Tons Mined.		Loss in Tons Mined.	
	No. of Days Worked.	No. of Men Employed.	No. of Hands Engaged in Manufacture.	No. of Tons Mined.	No. of Tons Purchased for Manufacturing Wares.	No. of Days Worked.	No. of Men Employed.	No. of Hands Engaged in the Manufacture.	No. of Tons Mined.	No. of Tons Purchased for Manufacturing Wares.	Gain in Miners.	Loss in Miners.	Gain in Hands Employed in Manufacture.	Loss in Hands Employed in Manufacture.	Gain in Tons Mined.	Loss in Tons Mined.																
Athens	234	35	365	106,361	.....	250	39	182	117,967	.....	4	.....	.....	.....	11,606	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belmont	.....	.....	.....	.....	.....	216	13	45	15,000	.....	13	.....	45	.....	15,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carroll	275	42	200	72,673	.....	238	62	265	72,200	.....	20	.....	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbiana	126	62	257	98,319	500	196	96	669	183,844	.....	34	.....	412	.....	85,525	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hocking	118	37	200	1,649	11,500	125	32	125	63,032	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holmes	155	1	.....	3,030	.....	190	5	21	4,457	155	4	.....	21	.....	1,427	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson	126	13	30	8,270	.....	253	14	95	16,931	5,176	1	.....	65	.....	8,661	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	220	99	473	173,985	.....	252	119	642	258,290	.....	20	.....	169	.....	84,305	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lawrence	105	23	.....	18,494	.....	85	34	.....	45,744	.....	11	.....	.....	.....	27,250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mahoning	124	11	21	9,250	77	77	24	57	16,685	.....	13	.....	36	.....	7,435	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muskingum	91	19	44	39,144	.....	77	24	44	29,774	1,341	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Perry	98	32	75	76,798	.....	131	28	90	27,196	.....	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scioto	158	65	91	66,472	4,000	173	68	230	60,938	4,116	3	.....	139	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stark	227	114	520	195,015	.....	219	117	458	292,124	.....	3	.....	.....	.....	97,109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Summit	213	38	290	123,799	1,800	257	37	318	90,984	2,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuscarawas	184	77	477	112,663	.....	232	110	551	173,108	.....	33	.....	74	.....	60,445	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trumbull	300	9	.....	1,750	.....	50	2	.....	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE SHOWING FIRE CLAY OUTPUT IN THE STATE DURING THE YEAR, ETC. Concluded.

Counties.	1889.						1900.						Employees.				Output.	
	No. of Days Worked.	No. of Men Employed.	No. of Hands Engaged in the Manufacture.	No. of Tons Mined.	No. of Tons Purchased for Manufacture.	No. of Days Worked.	No. of Men Employed.	No. of Hands Engaged in Manufacture.	No. of Tons Mined.	No. of Tons Purchased for Manufacture.	Gain in Miners.	Loss in Miners.	Gain in Hands Employed in Manufacture.	Loss in Hands Employed in Manufacture.	Gain in Tons Mined.	Loss in Tons Mined.		
Vinton	4	1				12	1	1	36		4		1		11			
Wayne				25		265	4	22	4,478				22		4,478			
Average Totals	162	678	3,043	1,173,697	18,200	173	829	3,815	1,473,088	13,088	168	17	1,092	320	403,252	103,861	299,391	Net Gain.
											151		772					Net Gain.

TABLE SHOWING THE FIRE CLAY PRODUCTION OF THE STATE
FROM JANUARY 1, 1884, TO DECEMBER 31, 1900.

Years.	Output Tons.	Gain.	Loss.
1884	168,208	.....	.....
1885	153,756	.....	14,458
1886	266,709	112,953	.....
1887	366,476	99,767	.....
1888	471,794	105,813	.....
1889	574,129	102,335	.....
1890	833,159	259,030	.....
1891	1,087,560	254,401	.....
1892	1,253,110	165,550	.....
1893	1,032,348	.....	220,762
1894	942,913	.....	89,435
1895	844,832	.....	97,061
1896	827,450	.....	17,862
1897	822,727	.....	4,722
1898	1,026,922	204,195	.....
1899	1,173,697	146,775	.....
1900	1,473,088	299,391	.....

IRON ORE INDUSTRY.

The statistics for the iron ore industry for the year 1900 show a marked increase over that of the preceding year. Three counties show gains as follows: Lawrence, 27,134 tons, a gain of 13,049 over that of 1899; followed by Scioto, which shows a gain of 6,980 tons; Jackson county, which failed to make returns for the year 1899, shows a production of 8,155 tons.

While the production of iron ore in the State of Ohio shows a tendency towards a decline for the year 1899, the year 1900 opened up with a decided increase in the trade, and in the construction and greater number of blast furnaces. Fifteen and twenty years ago, and even up a year ago, the capacity of a blast furnace was considered large at an output of forty tons, but the close of the present year shows the construction of larger furnaces than ever before, having an output of from two to six hundred tons. The demand for iron ore from Lake Superior has been greatly on the increase during the year 1900. While the iron industry for the year 1900 shows nothing phenomenal, it has been more steadily than ever on the increase.

TABLE SHOWING THE PRODUCTION OF IRON ORE BY COUNTY
DURING THE YEARS 1899 AND 1900, AND LOSS AND GAIN
EACH COUNTY.

Counties.	Hematite 1899.	Hematite 1900.	Gain.	Loss.
Jackson		8,155	8,155	
Lawrence	14,085	27,134	13,049	
Scioto	9,197	16,177	6,980	
Vinton	2,077	800		
Totals	25,359	52,266	28,184	
			26,907	

TABLE SHOWING THE IRON ORE PRODUCTION OF THE STATE
FROM 1884 TO 1900 INCLUSIVE.

Years.	Blackband.			Hematite.			Totals.
	Output Tons.	Loss.	Gain.	Output Tons.	Loss.	Gain.	
1884							2
1885	70,931			188,646			2
1886	83,947		13,012	260,537		71,891	3
1887	87,965		4,018	289,500		28,963	3
1888	82,054	5,911		171,298	118,202		2
1889	70,398	11,656		182,011		10,713	2
1890	41,848	28,550		127,240	51,771		1
1891	15,540	26,308		52,444	74,796		
1892	8,680	6,860		81,042		28,598	
1893	3,837	4,843		64,423	16,619		
1894		3,837		58,043	6,380		
1895				93,051		35,008	
1896				70,765	23,286		
1897				50,267	20,498		
1898				51,659		1,392	
1899				25,359	16,800		
1900				52,266		26,907	
Totals	465,204	87,965	17,030	1,818,551	330,352	203,472	2.5

PRODUCTION OF LIMESTONE.

The year's production of limestone for the year 1900 shows a gain in five of the several classifications into which the industry is divided, and a loss in four.

The first table is designed to show the number of days worked, number of men employed, and also the amount of raw material burned, etc., in the several counties in which limestone is produced. The second table is a comparison of the gain and loss of the year 1900 as compared with the year 1899.

The average time worked in 1900 was one hundred and forty days as compared with one hundred and forty-one so employed in the year 1899, and one hundred and thirty-two in 1898.

The number employed in the industry is shown to be three thousand seven hundred and sixty-eight; for the year 1899, three thousand one hundred and sixty-five; 1898, three thousand one hundred and forty-nine. Gains in the number of men employed are found in twenty-one counties, and losses occur in sixteen. The greatest gain was made in Scioto county, the amount being two hundred and ninety-eight; the greatest loss was in Highland county, amounting to sixty-four.

The number of tons of lime burned for stone amounted to five hundred and forty-seven thousand and forty-six, as compared with six hundred and twenty-six thousand two hundred and seventy-four tons in 1899, the output in this classification for the preceding year. Thirteen counties show gains, and twenty losses. The county showing the greatest gains was Stark, producing thirty-three thousand one hundred and thirty more tons than the amount produced for the year 1899. The heaviest loss occurs in Ottawa county, which is shown to be thirty-six thousand three hundred and seventy-seven tons.

For the year 1900, the number of tons of lime used for fluxing was nine hundred and thirty-six thousand eight hundred and ninety-one tons as compared with seven hundred and ninety-one thousand seven hundred and one tons for the year 1899, an increase of one hundred and forty-five thousand one hundred and ninety tons.

The number of cubic feet of dimension stone quarried in 1900 was one hundred and sixty-six thousand two hundred and seventy-six, showing a decrease in the production as compared with the year 1899, two hundred and thirty-eight thousand eight hundred and thirty-six cubic feet. Gains occur only in six counties, while decreases are found in fifteen.

The returns for building stone amounted to two hundred and seventy-four thousand nine hundred and nineteen cubic yards as produced in the thirty-four counties making reports. The statistics thus received show a gain in this direction of ten thousand two hundred and seventy-nine cubic yards over that of the previous year. These gains were made in twenty counties while sixteen report losses.

The gain in the number of cubic yards used for piers and protection purposes is shown to be thirty-three thousand one hundred and sixty-five cubic yards, while the number of square feet used for flagging shows a gain of thirty-one thousand seven hundred and four. The number of cubic yards used for curbing shows a loss of sixteen thousand five hundred and forty-one. The number of square feet used for paving shows a loss of seventeen thousand six hundred and twenty-six. A gain of four hundred and six thousand four hundred and ninety-two cubic yards is shown in the production of stone used for ballast and macadam.

PRODUCTION OF LIMESTONE IN OHIO DURING 1900.

Counties.	Average Number of Days Worked.	Number of Men Employed.	Number of Tons of Limestone Burned for Fluxing.	Number of Tons of Limestone Burned for Fluxing.	Cubic Feet of Dimension Stone.	Cubic Yards of Ordinary Building Stone.	Cubic Yards for Piers and Protection Purposes.	Square Feet of Flagging.	Square Feet of Paving.	Lineal Feet of Curbing.	Cubic Yards of Ballast and Macadam.
Adams	92	30	227	1,090		8,729	45	27,037	13,000		9,000
Allen	123	108	2,960	70							42,573
Belmont	140	6	210								2,000
Builer	115	21				5,630				4,154	118
Clark	228	144	24,140	14,462	10,357	20,654	3,116	405			30,555
Clermont	69	9			1,360	296					1,336
Crawford	123	34	103		603	1,980					43,050
Clinton	48	18			2,435	1,434		2,600	1,394		2,725
Delaware	131	76	13,917	3,721	5,250	10,347		740		545	11,130
Darke	163	5	712								
Erie	255	294	109,508	132,555	25,828	13,024	55,890	3,200			2,569
Franklin	186	372	252	174,633	1,213	17,171	15,558	400	500		188,367
Greene	140	69	329		4,645	5,858	500	1,380	500	4,060	8,775
Hamilton	165	121				19,281			4,000		41,773
Hancock	139	56	500			5,971				1,500	33,468
Hardin	167	159	3,180			500					119,832
Highland	143	49	231		6,220	5,163	1,000	5,316	2,672	1,200	17,817
Holmes	10	2				30					30
Jackson	90	24		8,450							1,700
Jefferson	40	3									250
Lawrence	107	103		58,865							2,425
Logan	125	21	35			8,123		600			4,000
Lucas	131	17				4,276					24,074
Marion	178	301	74,355	58,663	4,874	18,981		1,100			121,431

PRODUCTION OF LIMESTONE IN OHIO DURING 1900 — Concluded.

Counties.	Average Number of Days Worked.	Number of Men Employed.	Number of Tons of 2,000 Pounds Each Burned for Lime.	Number of Tons of 2,000 Pounds Each Burned for Fluxing.	Cubic Feet of Dimension Stone.	Cubic Yards of Ordinary Building Stone.	Cubic Yards for Piers and Protection Purposes.	Square Feet of Flagging.	Square Feet of Paving.	Lineal Feet of Curbing.	Cubic Yards of Ballast and Macadam.
Miami	197	120	5,923	5,250	53,500	24,755	4,755	33,700	3,680	27,600	22,877
Montgomery	138	94	3,185	.....	16,633	14,904	558	1,766	100	314	23,851
Muskingum	8	4	.....	.....	.....	117	.....	.....	.....	.....	350
Mercer	130	6	244	.....	.....	50	.....	.....	.....	.....	100
Ottawa	222	525	163,035	459,878	.....	2,308	37,806	.....	.....	.....	75,625
Paulding	137	36	1,260	.....	.....	21,000	70	.....	.....	.....	16,000
Pickaway	250	2	.....	.....	60	562	.....	.....	.....	.....	350
Pike	15	3	140	.....	.....	.....	.....	.....	.....	.....	.....
Preble	105	72	2,471	500	18,555	22,713	500	43,000	17,948	520	18,980
Putnam	85	67	8,820	.....	.....	4,823	186	.....	18,350	.....	12,950
Ross	265	35	1,841	.....	5,216	4,417	280	7,712	2,126	657	10,474
Sandusky	240	43	16,210	.....	.....	6,633	.....	.....	.....	.....	6,050
Seneca	151	138	17,092	.....	5,920	10,574	.....	956	.....	.....	161,316
Shelby	200	6	2,240	.....	.....	.....	.....	.....	.....	.....	.....
Stark	208	27	39,916	.....	.....	.....	.....	.....	.....	.....	.....
Scioto	162	313	.....	13,324	3,527	4,963	.....	1,325	.....	.....	.....
Union	30	2	.....	.....	.....	300	.....	500	.....	.....	.....
Van Wert	134	67	1,860	.....	.....	2,502	.....	.....	.....	.....	148,420
Wood	189	166	52,150	5,430	.....	6,850	.....	100	.....	.....	64,500
Totals	140	3,768	547,046	936,891	166,276	274,919	120,264	131,837	64,170	40,550	127,084

TABLE SHOWING THE COMPARATIVE GAIN AND LOSS IN THE VARIOUS CLASSIFICATIONS OF LIMESTONE,
THE PRODUCTION OF 1900 BEING COMPARED WITH THAT OF 1899.

Counties.	Number of days worked.		Number of men employed.		Tons of 2,000 pounds each burned for lime.		Tons of 2,000 pounds each burned for fluxing.		Cubic feet of dimension stone.		Cubic yards of ordinary building stone.		Cubic yards for piers and protection purposes.		Square feet of flagging.		Square feet of paving.		Lineal feet of curbing.		Cubic yards of ballast and macadam.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
Adams	14	10	4	23	2,660	21	70	4,976														
Allen	140	10	6	23	2,660	21	70	4,976														
Belmont	36	10	6	23	2,660	21	70	4,976														
Butler	33	67	7	13	5,219	9,504																
Clark	45	21	10	10	5,027	3,721																
Clermont	99	86	157	4	15,806	86,263																
Crawford	10	5	4	8	2,000	2,000																
Clinton	9	3	100	64	14,480	3,076																
Delaware	99	86	157	4	15,806	86,263																
Darke	10	5	4	8	2,000	2,000																
Franklin	99	86	157	4	15,806	86,263																
Greene	2	4	8	20	2,000	2,000																
Hamilton	10	5	4	8	2,000	2,000																
Hancock	9	3	100	64	14,480	3,076																
Hardin	90	86	157	4	15,806	86,263																
Highland	20	12	66	11	8,397	15,860																
Holmes	90	86	157	4	15,806	86,263																
Jackson	29	12	66	11	8,397	15,860																
Jefferson	29	12	66	11	8,397	15,860																
Lawrence	29	12	66	11	8,397	15,860																
Logan	29	12	66	11	8,397	15,860																
Lucas	29	12	66	11	8,397	15,860																
Marion	29	12	66	11	8,397	15,860																
Miami	29	12	66	11	8,397	15,860																
Montgomery	29	12	66	11	8,397	15,860																
Muskingum	29	12	66	11	8,397	15,860																

TABLE SHOWING THE COMPARATIVE GAIN AND LOSS IN THE VARIOUS CLASSIFICATIONS OF LIMESTONE, ETC.—Concluded.

Counties	Number of days worked.		Number of men employed.		Tons of 2,000 pounds each burned for lime.		Tons of 2,000 pounds each burned for fluxing.		Cubic feet of dimensioned stone.		Cubic yards of ordinary building stone.		Cubic yards for piers and protection purposes.		Square feet of flagging.		Square feet of paving.		Lineal feet of curbing.		Cubic yards of ballast and macadam.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
Mercer	20				450						50		14,021								50	
Ottawa	23				36,377	48,160			102		102		14,021								74,150	
Paulding	27		13		1,000				10,570		10,570		70								12,700	
Pickaway	100								512		512										765	
Pike	15		3		140				1,240		1,240										300	
Preble	25		7		87				12,133		12,133										2,337	
Putnam	21		29		8,696				124		1,794		4,300		32,650		15,608		16,473		16,473	
Ross	265		35		1,841				4,417		1,794		21		7,712		1,650		10,474		13,803	
Sandusky	5		8		3,547				2,440		734		280		9,154		2,120		10,474		10,474	
Seneca	5		15		21,548				2,440		3,487						657				57,075	
Shelby	8		1		400																1,240	
Stark	8		8		33,130																	
Stout	25		298						5,273													
Union	30		2		962				3,284		3,284				3,211							
Van Wert	55		19						870						500						89,338	
Wood	31		35		2,718				3,473						100						5,176	
Wyandot	100		8		630						800										2,000	
Totals	1050	598	533	250	60,438	189,658	161,400	16,279	40,022	257,858	50,847	40,548	47,019	14,754	71,864	40,160	24,968	42,594	10,765	27,296	540,743	124,251
Aggregate gain and loss	461		603						238,836	70,279			38,165		31,704		17,030				16,541	406,492

TABLE SHOWING THE COMPARATIVE PRODUCTION OF LIMESTONE IN OHIO FROM 1886 TO 1900, INCLUSIVE.

Years.	Average Number Days Worked.	Number of Men Employed.	Number Tons of 2,000 Pounds Burned for Lime.	Number Tons of 2,000 Pounds Burned for Fluxing.	Cubic Feet of Dimension Stone.	Cubic Yards of Ordinary Building Stone.	Cubic Yards for Piers and Protection Purposes.	Square Feet of Flagging.	Square Feet of Paving.	Lineal Feet of Curbing.	Cubic Yards of Ballast and Macadam.
1886	149	2,383	517,270	328,080	566,697	295,231	63,050	187,900	154,636	60,650	186,810
1887	182	2,767	619,027	478,674	950,393	385,247	78,932	350,954	289,195	139,174	416,018
1888	165	3,025	602,074	666,481	1,795,038	.....	78,381	580,901	313,855	205,227	445,770
1889	165	2,631	849,442	235,998	898,886	364,685	69,876	413,400	586,361	209,339	354,544
1890	171	2,445	689,827	308,521	333,077	270,367	81,414	673,850	507,313	165,434	432,650
1891	143	3,286	744,946	284,478	634,901	361,637	65,295	417,855	4,948,939	200,756	622,194
1892	132	3,353	631,049	217,981	1,057,157	323,600	48,102	171,567	2,883,208	101,820	764,784
1893	149	2,929	396,690	108,376	748,712	290,614	57,374	226,654	393,883	209,327	757,142
1894	138	2,484	349,631	240,173	1,393,792	181,722	22,839	206,736	312,868	144,042	435,764
1895	127	3,829	1,175,988	429,632	500,648	253,900	48,675	573,634	640,836	152,873	650,217
1896	132	3,186	397,162	623,544	260,289	215,900	29,114	137,579	163,373	71,236	553,329
1897	131	3,398	481,871	320,437	371,741	248,392	97,548	145,331	113,025	55,168	629,044
1898	132	3,149	624,921	571,029	605,172	308,343	47,762	71,606	43,256	52,940	729,896
1899	142	3,165	626,274	791,701	405,112	264,640	87,099	100,133	81,796	57,091	864,349
1900	141	3,680	547,046	882,426	166,276	274,919	120,264	131,837	64,170	40,550	1,268,416
Gain	.....	515	.....	90,725	.....	10,279	33,165	31,704	.....	.....	404,067
Loss	1	.....	79,228	.....	238,836	.....	.....	.....	17,626	16,541	.....

MINE CASUALTIES DURING THE YEAR.

The number of fatal accidents occurring in the year 1900 was sixty-eight as compared with fifty-nine in the year 1899. When we take into consideration the fact that the amount of coal produced has increased over three and one half millions of tons, the number of men employed in and around the mine was increased by the addition of three thousand six hundred and seventy-four, and the number of days worked in 1900 was one hundred and seventy-three and four-fifteenths, as compared with one hundred and fifty-two and one-third days in the year 1899, it will be seen that the number of accidents were not increased out of proportion to the rapid growth of the trade.

The fatal accidents are distributed among sixteen of the counties in which men are engaged in the mining industry, the largest number being twelve. Twelve of these occurred in Jackson county; Guernsey comes second with eleven, Athens nine, Stark seven, and Belmont and Perry five each.

All accidents which disable a person for more than three weeks are classified as serious, and of this class Athens and Stark counties each have thirty-one, Guernsey twenty-eight, Belmont twenty-six, Perry twenty-five and Jackson twenty-one.

The total number of minor accidents was one hundred and forty-nine. These occurred in seventeen of the coal producing counties, the largest numbers being in Athens, Belmont and Perry, the first two having twenty-one each and the last one twenty.

The second and third tables compare the accidents occurring in the year 1900 with those in the year 1899, showing the gain or loss accordingly. Perry county shows the greatest gain in fatal accidents, showing a total of five, while Jefferson shows the greatest loss, which is four. Athens, Guernsey and Jackson each show a gain of three, and Muskingum two, while Coshocton comes second in the losses, having four, and Lawrence third, with two.

TABLE SHOWING THE NUMBER OF FATAL, SERIOUS AND MINOR
ACIDENTS AND THE NUMBER OF EACH CLASSIFICATION THAT
OCCURRED IN EACH COUNTY.

Counties.	Fatal	Serious.	Minor.	Total.
Athens	9	31	21	61
Belmont	5	26	21	52
Carroll				
Columbiana	8	5	4	12
Coshocton		3	6	9
Gallia				
Guernsey	11	28	18	57
Harrison				
Holmes	1			1
Hocking	2	14	6	22
Jackson	12	21	15	48
Jefferson	2	7	1	10
Lawrence		1	1	2
Mahoning				
Medina	1	1	2	4
Meigs	1	2	2	5
Morgan				
Monroe				
Muskingum	3		2	5
Noble				
Perry	5	25	20	50
Portage		1	6	7
Scioto	1			1
Stark	7	31	16	54
Summit		2		2
Trumbull				
Tuscarawas	4	8	7	19
Vinton	1	1		2
Washington				
Wayne			1	1
Totals	68	207	149	424

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TABLE SHOWING A COMPARISON OF THE CASUALTIE
WITH THOSE OF 1899.

Counties.	1899.				1900.			
	Fatal.	Serious.	Minor.	Total.	Fatal.	Serious.	Minor.	Total.
Athens	6	18	16	40	9	31	21	61
Belmont	6	17	17	40	5	26	21	52
Carroll			2	2				
Columbiana	2	11	2	15	3	5	4	12
Coshocton	3	5	5	13		3	6	9
Gallia			7	7				
Guernsey	8	28		36	11	28	18	57
Harrison		1		1				
Holmes					1			1
Hocking	3	9	5	17	2	14	6	22
Jackson	9	16	17	42	12	31	15	48
Jefferson	6	15	12	33	2	7	1	10
Lawrence	2	5	6	13		1	1	2
Mahoning								
Medina	1	1	1	3	1	1	2	4
Meigs		4	2	6	1	2	2	5
Morgan		2		2				
Monroe								
Muskingum	1			1	3		2	5
Noble		5	2	7				
Perry		16	6	22	5	25	20	50
Portage	1	3	2	6		1	6	7
Scioto					1			1
Stark	8	32	16	56	7	31	16	54
Summit		1		1		2		2
Trumbull								
Tuscarawas	3	15	6	24	4	8	7	19
Vinton			2	2	1	1		2
Washington								
Wayne			1	1			1	1
Totals.....	59	204	127	390	68	207	149	424

TABLE SHOWING THE COMPARISON OF THE ACCIDENTS OCCURRING IN 1899 AND 1900.

Counties.	Fatal.		Serious.		Minor.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
Athens	3		13		5	
Belmont		1	9		4	
Carroll						2
Columbiana	1			6	2	
Coshocton		3		2	1	
Gallia						7
Guernsey	3				18	
Harrison				1		
Hocking		1	5		1	
Holmes	1					
Jackson	3		5			2
Jefferson		4		8		11
Lawrence		2		4		5
Mahoning						
Medina					1	
Meigs	1			2		
Monroe						
Morgan				2		
Muskingum	2				2	
Noble				3		2
Perry	5		9		14	
Portage		1		2	4	
Scioto	1					
Stark		1		1		
Summit			1			
Tuscarawas	1			7	1	
Trumbull						
Vinton	1		1			2
Washington						
Wayne						
Totals	22	13	43	40	53	31

MINE ACCIDENTS AND THE CAUSES TO WHICH THEY ARE ATTRIBUTABLE.

The total number of mine accidents in the year 1900 was four hundred and twenty-four, sixty-eight of which were fatal, two hundred and seven proved to be of a serious nature, and the remaining one hundred and forty-nine were only slightly injured.

As in previous years the largest number of accidents is attributable to the falling of roof, the total number injured in this way being one hundred and seventy-two, of which thirty-nine were fatal. The total number of accidents from this cause amounted to forty and six-tenths percent. of the whole number which occurred.

The total number of men injured by mine cars was one hundred and four, which was twenty-four and five-tenths percent of the whole number of accidents. Of these ten resulted fatally, thirty-eight seriously, and fifty-six were of a slight nature.

Premature explosions and falling coal are each responsible for the death of five persons, while two met their death by being crushed by railroad cars, one by falling down a shaft and three from causes undeterminable, and as such are classified as miscellaneous.

Of the two hundred and seven serious accidents eighty-seven were due to falling roof, forty from falls of coal, thirty-eight received injuries from mine cars, twelve from premature explosions, while the other thirty were from various causes which endanger the miner's health and life.

Of the minor accidents the largest number, fifty-six, were injuries received from mine cars, forty-six from falling roof, seventeen from falling coal, and the remainder were due to the various dangers that beset the miner's way.

The number of men employed in and about the mines in the year 1900 was thirty-one thousand six hundred and ninety-two; the number of fatal accidents number sixty-eight. From this it will be seen that there was one death for every four hundred and sixty-six men employed.

The total number of accidents was four hundred and twenty-four, the average of one for every seventy-five men employed, or a slight decrease from 1899 when there was an average of one for every seventy-two men employed.

TABLE SHOWING THE NUMBER AND CHARACTER OF THE ACCIDENTS OCCURRING DURING THE YEAR AND TO WHAT SOURCES THEY WERE ATTRIBUTABLE.

Causes.	Fatal.	Serious.	Minor.	Totals.	Percentage.
Falls of roof.....	39	87	46	172	40.6
Falls of coal.....	5	40	17	62	14.6
Injured by mine cars.....	10	38	56	104	24.5
Premature explosion.....	5	12	9	26	6.1
Explosion of gas (CH ₄).....	3	3	.....	6	1.4
Caught under cage.....	.....	2	2	4	.9
Injured by mules and horses.....	.....	5	1	6	1.4
Falls of timber.....	.....	2	2	4	.9
Falls down shaft.....	1	1	.....	2	.5
Injured by railroad cars.....	2	1	2	5	1.1
Falls from tippie.....	.....	1	.....	1	.2
Shot blowing through rib.....	.....	.....	1	1	.2
Injured by miner's pick.....	.....	2	1	3	.7
Injured by mining machines.....	.....	6	3	9	2.1
Miscellaneous.....	3	7	9	19	4.4
Totals	68	207	149	424	.....

TABLE SHOWING THE NUMBER AND CHARACTER OF ACCIDENTS WHICH RESULTED FROM THE PRINCIPAL SOURCES AS REPORTED FROM EACH COUNTY.

Counties.	Fall of Roof.			Falls of Coal.			Injured by Mine Cars.			Premature Ex-plosion.			Ex-plosion of Fire Damp.			Miscellaneous.			Totals.
	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	
Athens	2	10	3	...	7	...	1	10	9	...	...	2	3	...	...	3	4	7	61
Belmont	2	17	6	...	4	1	3	3	11	...	...	2	3	...	...	...	2	3	52
Carroll	3	...	...	...	...	...	...	1	2	...	2	...	...	...	...	...	2	...	12
Columbiana	3	...	...	...	...	...	...	1	2	...	2	...	...	...	...	...	2	...	12
Coshocton .....	...	...	3	...	1	1	...	1	1	...	2	...	...	...	...	...	...	1	9
Gallia .....	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Guernsey	6	7	6	...	5	2	2	9	9	...	...	...	2	...	...	3	5	1	57
Harrison .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Holmes .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Hocking	2	5	3	...	3	3	...	...	...	...	...	...	...	...	...	...	6	...	22
Jackson	9	11	3	...	1	...	...	4	6	3	...	2	...	...	...	...	5	4	48
Jefferson .....	...	5	1	...	1	...	2	...	...	...	...	...	...	...	...	...	1	...	10
Lawrence .....	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
Mahoning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Medina .....	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	1	4
Meigs	1	1	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	5
Morgan .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monroe .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muskingum	3	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Noble .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Perry	4	13	6	1	6	3	...	5	5	...	1	...	...	...	...	1	5	...	50
Portage .....	...	1	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	7
Scioto .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Stark	4	11	7	1	8	1	...	3	5	1	2	2	...	1	...	1	6	1	54
Summit .....	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
Trumbull .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuscarawas	2	4	1	1	2	4	1	2	2	...	...	...	...	...	...	...	...	...	19
Vinton	1	1	...	2
Washington
Wayne	1	1
Totals.	39	87	46	5	40	17	10	38	56	4	6	7	3	3	...	7	33	23	424

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Years.	Falls of Roof.	Falls of Coal.	Injured by Cars.	Premature Explosion.	Explosion of (CH ₄).	Falls Down Sh.	Crushed Under Cage.	Falls From Timber.	Kicked by Mule or Horse.	Injured by R. Cars.	Falls of Timber.	No Cause Given.	Shot Blow Through Rib.	Injured by Mine Pick.	Heart Failure.	Electric Wires.	Injured by Mining Machines.	Miscellaneous.	Totals.
1888	100	47	46	13	4	1	8	9	2	2	2	9	1	1	1	1	1	9	238
1889	92	50	48	12	4	1	1	1	4	2	1	2	1	1	1	1	1	11	230
1890	109	44	59	13	4	2	1	1	4	2	1	3	1	1	1	1	1	7	245
1891	112	26	47	24	6	1	3	1	5	1	4	1	1	1	1	1	1	14	242
1892	126	41	73	21	3	1	1	2	5	3	4	1	1	1	1	1	1	11	291
1893	118	55	88	17	2	5	1	4	6	3	3	1	1	1	1	1	1	14	327
1894	98	39	60	17	5	5	4	1	1	2	3	1	3	1	4	1	1	15	257
1895	108	46	67	23	1	1	3	1	4	2	1	1	3	1	1	1	3	8	271
1896	133	34	74	20	7	1	1	1	6	2	1	1	3	1	2	1	3	10	303
1897	98	48	70	16	5	2	1	1	6	2	1	1	4	1	1	1	7	12	277
1898	156	47	69	8	13	1	6	2	3	3	3	1	3	1	3	1	11	14	341
1899	153	52	100	20	10	3	6	1	6	5	4	1	3	1	3	1	8	13	390
1900	172	62	104	26	6	4	4	1	6	5	4	1	1	3	1	1	9	19	424
Totals	1,575	591	905	230	70	27	39	17	58	31	26	11	25	17	14	4	41	157	3,836

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO LIFE LOST, TO THE SERIOUS INJURY AND TO THE TOTAL BER OF FATAL AND SERIOUS ACCIDENTS FOR EACH YEAR THE CREATION OF THE DEPARTMENT.

Years.	Number of Fatal Accidents.	Number of Serious Accidents.	Number of Tons Mined to the Person Killed or Seriously Injured and Number of Tons to the Total.			Name of Chief Inspector.
			Fatal.	Serious.	Total	
1874	20	80	108,919	4,844	31,419	Andrew Roy.
1875	23	40	202,667	121,606	77,210	"
1876	13	70	269,999	50,000	42,168	"
1877	30	39	175,000	134,615	76,087	"
1878	20					Jas. D. Poston.
1879						David Owen.
1880	22	61	292,624	114,754	84,217	Andrew Roy.
1881	29		283,621			"
1882	25		378,000			"
1883	26		316,516			"
1884	26	40	226,636	143,433	86,932	Thos. B. Bancroft.
1885	51	32	244,258	153,258	94,170	"
1886	43	65	194,308	194,772	78,104	"
1887	36	75	286,158	137,356	92,808	"
1888	29	79	376,239	138,113	100,934	Robt. M. Haseltine
1889	33	52	330,527	209,757	128,322	"
1890	42	52	280,687	226,708	125,413	"
1891	44	66	296,595	197,730	118,636	"
1892	42	93	347,929	157,129	108,170	"
1893	32	123	463,378	120,553	95,665	"
1894	45	116	364,672	102,674	73,976	"
1895	52	152	263,151	90,025	67,078	"
1896	41	159	314,942	81,211	64,563	"
1897	40	142	311,221	87,668	68,400	"
1898	52	155	270,463	90,736	67,913	"
1899	59	204	269,643	77,985	60,490	"
1900	68	207	285,686	93,848	70,643	Elmer G. Biddison

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TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO.

	1886.			1887.			1888.		
	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Colorado	165,287	.....	545	149,311	34,456	.....	75,361	27,319	.....
Great Britain	214,909	.....	497	162,934	.....	551	191,369	.....	602
Illinois	428,571	66,126	.....	303,002	69,017	654	260,512	80,046	535
Indiana	183,494	333,333	.....	927,323	56,830	.....	196,311	157,049	458
Iowa	.....	350,306	.....	224,297	52,336	799	177,401	49,832	.....
Kansas	235,714	61,111	.....	256,172	163,019	929	154,826	45,874	631
Kentucky	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland	.....	.....	.....	.....	.....	.....	.....	.....	.....
Missouri	50,654	21,709	206	.....	.....	.....	150,383	105,674	210
Montana	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nova Scotia	194,309	129,772	474	238,691	167,083	.....	888,064	59,204	2,325
Ohio	175,311	53,672	440	286,158	137,356	618	376,239	138,113	765
Pennsylvania	.....	.....	.....	169,327	151,900	512	166,532	56,849	361
Tennessee	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia	.....	.....	.....	.....	.....	.....	191,984	63,152	346

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO.—Continued.

	1889.			1890.			1891.		
	Fatal.	Non-fatal.	Number of Miners for Each Life Lost.	Fatal.	Non-fatal.	Number of Miners for Each Life Lost.	Fatal.	Non-fatal.	Number of Miners for Each Life Lost.
Colorado	178,227		530	104,375	31,385	239	121,126	27,230	227
Great Britain	333,745		716	286,316	51,955	539	261,012	42,672	549
Illinois		69,738		1,239,429	578,400	936			
Indiana			321	331,709	132,083	824			
Iowa	98,600	52,772		314,506	125,802	955	206,776	88,618	507
Kansas				238,089	101,343	406	250,339	78,678	813
Kentucky	156,136	56,792	378				184,383		542
Maryland							380,084	285,063	437
Missouri	222,347	111,173	514	243,739	87,049	765	147,223	82,813	413
Montana			1,818						
Nova Scotia	219,539	97,571	646	220,444	94,479	591	681,594	638,996	1,915
Ohio	330,527	209,757	615	280,687	226,708	456	296,595	65,910	545
Pennsylvania	150,202	56,789	144	154,257	58,255	181	131,980	64,814	287
Tennessee							109,295	43,718	253
Utah									
Washington									
West Virginia		206,358		206,358	54,450	327	202,262	104,020	362

INSPECTOR OF MINES.

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	1892.			1893.			1894.		
	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	110,330	30,170	223	310,000	30,371	529	229,200		470
Colorado				146,234		292	157,580		
Great Britain							237,688	32,848	534
Illinois	313,372	46,114	590	289,124	49,503	513			
Indiana	236,569	166,474	370	198,132	124,539	338			
Iowa	202,373	87,988	465	159,133	85,461	361	198,809	134,906	540
Kansas				221,687	47,245	659	138,893	68,136	388
Kentucky	378,412	151,364	1,186	291,854	132,090	939	295,719	155,642	803
Maryland	510,818	170,273	661	665,549	415,968	814	443,140	238,614	
Missouri	150,864	73,592	401	151,926	122,709	369	125,438	82,271	255
Nova Scotia	161,898	48,569		336,543	35,802	1,178			
Ohio	347,929	58,634	642	436,120	50,608	847	364,672	102,674	559
Pennsylvania	177,983	76,166	454	167,711	68,270	382	151,521	66,776	401
South Dakota							76,688	122,700	233
Tennessee	166,619	80,437	415	128,633	24,396	457	170,102	52,205	314
Utah	180,836	40,186		418,049	41,804	829			
Washington	20,738	27,157	72	134,317	31,812	314			
West Virginia	241,969	81,167	384	151,790	77,510	172	178,974	81,856	68

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO.—Continued.

	1895.			1896.			1897.		
	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.	Number of Tons Mined for Each Accident.		Number of Miners for Each Life Lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	150,150		217	205,201		353	151,122		326
Colorado	145,195	29,553	320	49,582	57,146	99			
Great Britain				190,596		696	207,739		715
Illinois	236,478	29,312	515	256,969	29,444	429	290,910	38,751	490
Indiana	187,438	81,360	343	145,290	61,638		264,225	176,170	
Iowa	159,792	76,091	550	153,282	75,010	498	172,715	70,365	531
Kansas	319,084	75,972	936	265,979	127,669	734	549,468	109,893	1,450
Kentucky	400,971	178,209	983	530,580	167,551	1,258	275,338	122,372	645
Maryland	386,611	267,653							
Missouri	175,621	182,205	557	151,272	121,007	412	303,674	105,625	1,639
Iowa Scotia									
Ohio	263,151	90,025	431	314,942	81,211	694	311,221	87,668	720
Pennsylvania	178,600	68,715	397	144,205	84,419	342	177,350	91,886	424
South Dakota									
Tennessee	62,695			121,077	50,259		237,211		
Utah				125,811	55,916		194,031		
Washington	33,249	48,489		150,316	40,084		190,027	32,368	
West Virginia	118,965		224	205,692	101,287	372	209,040	77,607	346

[illegible]

FATAL ACCIDENTS.

1899.

NOVEMBER.

November 17. Thomas K. Stevenson, Newlun mine, Vinton county, killed by a fall of rock.

November 23. John Gingera, Trail Run mine, Guernsey county, killed by fall of slate.

November 24. George Kinney, Kinney mine, Muskingum county, killed by a fall of slate.

November 27. David Stewart, Wellston No. 3 mine, Jackson county, injured by a fall of slate. Died November 28.

DECEMBER.

December 7. Charles Gray, Fluhart No. 1 mine, Jackson county, killed by a premature explosion.

December 8. John Witmeyer, North Massillon No. 2 mine, Stark county, killed by falling from a railway flat.

December 11. Charles Atchinson, Kings mine, Guernsey county, fatally burned by an explosion of powder. Died December 19.

December 20. Patrick Collins, Congo No. 1 mine, Perry county, killed by a fall of slate.

1900.

January 3. John Breco, Walhonding mine, Guernsey county, killed by a fall of slate.

January 12. Andy Csanyi, Walhonding mine, Guernsey county, killed by a fall of rock.

January 15. James McNeal, Hamburg mine, Columbiana county, killed by a fall of soapstone.

January 16. Carlos Peters, Walhonding mine, Guernsey county, killed by being struck by a bar with which he was prying the engine.

January 18. Lewis Tyler, Comet mine, Jackson county, killed by a fall of slate.

January 18. Albert Stouffer, Wainwright No. 4 mine, Tuscarawas county, fatally injured by being squeezed between loaded mine cars and roof. Died January 25.

January 26. Chris. Schram, Belmont No. 2 mine, Belmont county, injured by a mine car jumping the track. Died January 31.

FEBRUARY.

February 4. James Evans, Morris No. 3 mine, Hocking county, fatally injured by a fall of rock. Died February 6.

February 6. Conrade Hoar, Eureka mine, Stark county, killed by a fall of coal.

February 13. Wm. Brown, East Goshen No. 1 mine, Tuscarawas county, killed by a fall of roof.

February 22. Wade Breidenthal, Walhonding mine, Guernsey county, killed by a fall of slate.

February 24. Michael Burns, Aetna Standard mine, Belmont county, killed by a fall of soapstone.

February 26. Frederick Kramer, Patrick mine, Tuscarawas county, killed by a fall of coal.

MARCH.

- ch 6. Richard Richards, Aetna Standard mine, Belmont county, killed by
ocked down and run over by a mine car.
- ch 8. James Nichols, Wellston No. 3 mine, Jackson county, killed by
al from the delayed explosion of a shot.
- ch 10. Eli Thomas, Syracuse Slope mine, Meigs county, killed by a fall
- ch 12. Chas. C. Robinson, Imperial mine, Guernsey county, killed by a
ate. Died March 13.
- ch 22. John Younger, King's mine, Guernsey county, injured by a fall
slate. Died March 28.
- ch 22. Henry Vogel, Peacock mine, Perry county, killed by a fall of
te.
- ch 26. Andrew Holzaphel, Superior No. 4 mine, Jackson county, killed
l of slate.

APRIL.

- l 5. David Davis, Superior No. 3 mine, Jackson county, killed by a fall
- l 5. Jacob Tucker, Superior No. 3 mine, Jackson county, killed by a
ate.
- l 5. A. J. Willis, Superior No. 3 mine, Jackson county, killed by a fall
- l 16. Robert McComb, Walhonding mine, Guernsey county, killed by
ught between mine car and rib.
- l 21. Howard McLaughlin, Job's mine, Athens county, killed by a fall
- l 23. John Sherman, Emma No. 3 mine, Jackson county, killed by a fall
- l 30. Lewis Thompson, Chestnut Ridge mine, Perry county, killed by a
ate.

MAY.

3. John Nairn, Congo No. 2 mine, Perry county, killed by a fall of slate.
4. Phillip Payne, Long Run mine, Jefferson county, killed by being run
a loaded mine car.
12. Chas. Muircraft, Congo No. 2 mine, Perry county, killed by a fall
14. John McGinnis, Woodland mine, Stark county, killed by a fall of
18. Clarence Wilson, Doanville mine, Athens county, killed by a car
too far over a rail, and the end of the rail flying up at one end and strik-
on the head.
21. John Sprowl, Diamond mine, Tuscarawas county, killed by a fall

JUNE.

8. Aaron Swanson, Phoenix No. 2 mine, Athens county, killed by an
n of gas.
8. Evan Joseph, Phoenix No. 2 mine, Athens county, killed by an
n of gas.
8. John McClelland, Phoenix No. 2 mine, Athens county, killed by an
n of gas.
13. J. A. Sigman, Trail Run mine, Guernsey county, killed by being
by loaded mine cars. Died June 14.

June 15. John Kwiatkowski, Dillon No. 2 mine, Jefferson county, killed by being caught between mine cars and rib.

June 18. Elias Ferris, Tom Corwin No. 1 mine, Jackson county, killed by a fall of slate.

June 28. Geo. W. Williamson, Belmont No. 2 mine, Belmont county, killed by a rope breaking and mine car running over him.

June 29. Wm. Stemmeyer, Daleton No. 2 mine, Athens county, fatally injured by being caught between mine cars and pillar. Died July 4.

JULY.

July 2. Chas. Keith, Maynard mine, Muskingum county, killed by a fall of draw slate.

July 10. Elmer Evans, Minker Run mine, Athens county, killed by a fall of slate.

July 12. Christian Held, Brookfield No. 2 mine, Stark county, killed by a fall of rock.

July 13. Albert Aaman, Thouvenin mine, Stark county, killed by a fall of rock.

July 16. Geo. Scott, Card No. 3 mine, Medina county, back injured by a fall of coal. Died July 21.

July 25. Henry Springfield, Harper's 3 Ft. mine, Muskingum county, killed by a fall of slate.

AUGUST.

SEPTEMBER.

September 4. Thos. Doty, Irish Hollow mine, Scioto county, killed by a collision of mine cars.

September 7. A. C. Skinner, No. 10 mine, Athens county, injured by falling in front of railway flats. Died September 25.

September 8. John House, Slope mine, Columbiana county, killed by a fall of slate.

September 13. Edward Ecuëbert, Minglewood No. 4 mine, Stark county, killed by a fall of slate.

September 22. Frank Pouse, Standard mine, Belmont county, killed by fall of soapstone. Died September 23.

OCTOBER.

October 2. James McKinney, King's mine, Guernsey county, killed by falling down a shaft.

October 2. Edmund Bolen, Fluhart No. 2 mine, Jackson county, skull fractured by a premature explosion.

October 2. Arthur LaFollett, No. 29 mine, Hocking county, killed by a fall of slate.

October 8. Howard Hefflin, Meehan mine, Columbiana county, killed by a fall of slate.

October 9. John Fowler, Jones No. 2 mine, Jackson county, killed by a fall of slate. Died November 18.

October 19. John Thorp, Job's mine, Athens county, killed by poles slipping and throwing him from top of power house while in the course of erecting it.

October 24. John Stares, Carrillon mine, Holmes county, killed by a fall of coal.

October 30. Joseph Duedeck, North Massillon No. 2 mine, Stark county, killed by premature explosion. Injured October 30; died November 2.

SERIOUS ACCIDENTS.

1899.

NOVEMBER.

November 17. Wade Young, Minker Run mine, Athens county, leg injured by a fall of slate.

November 18. Henry Wilson, No. 29 mine, Athens county, foot injured by being caught in one of the bits of a mining machine.

November 20. Patrick Friel, Milton No. 1 mine, Jackson county, injured by a fall of draw slate.

November 20. John Razes, Spring Valley mine, Perry county, hips injured by a fall of slate.

November 23. Valentine Morshansar, Hernbrook mine, Stark county, back injured by a fall of slate and coal.

November 27. Burke Alison, Crescent mine, Belmont county, leg broken by a fall of soapstone.

November 28. Jesse Stempley, Forsythe mine, Guernsey county, two fingers cut off by slipping and falling under a mine car.

DECEMBER.

December 1. C. Lorandilla, Wheeling Creek No. 1 mine, Belmont county, back injured by a fall of slate.

December 2. John De Francisco, Imperial mine, Guernsey county, face and hands burned by an explosion of gas.

December 2. Albert Harden, Imperial mine, Guernsey county, face and hands burned by an explosion of gas.

December 2. J. Zerby, Wheeling Creek No. 1 mine, Belmont county, head injured and finger bruised by a fall of top coal.

December 9. Lorence Busby, King's mine, Guernsey county, toe broken by a machine jack falling on it.

December 11. Chas. Touvills, King's mine, Guernsey county, face and neck burned by an explosion of powder.

December 11. Jud. Crosley, King's mine, Guernsey county, burned by an explosion of powder.

December 12. Wm. Wallace, Sand Run No. 1 mine, Hocking county, collar bone broken by a horse knocking him down.

December 12. John Snyder, Somerdale No. 1 mine, Tuscarawas county, ribs fractured by a fall of roof.

December 13. John Dorrان, Milton No. 2 mine, Jackson county, three fingers mashed by blocking mine car.

December 13. W. Sutton, Long Run mine, Jefferson county, two fingers cut off by trying to throw the latches.

December 16. Thos. Kinsey, North Massillon No. 2 mine, Stark county, back broken by a fall of slate.

December 16. Harry Kisor, Buckeye mine, Jackson county, ankle dislocated by a fall of slate.

December 18. Wm. Blanchard, Orbiston mine, Athens county, collar bone broken by a fall of coal.

December 19. Elmer Lyons, Dillon No. 2 mine, Jefferson county, leg broken by a fall of slate.

December 21. Frank Gossman, Minglewood No. 4 mine, Stark county, breast seriously injured by a fall of slate.

December 28. Wm. Wallace, Sand Run mine, Hocking county, collar bone broken by a horse falling against him on rope switch.

1900.

JANUARY.

January 2. Howard Horn, Nail Mill mine, Belmont county, leg taken being caught by coal cars.

January 2. John Moore, Black Diamond mine, Athens county, hand injured by a fall of stone.

January 3. Wm. Phillips, Milton No. 1 mine, Jackson county, leg broken by a fall of slate.

January 3. John Katara, Black Diamond mine, Belmont county, hand and head injured by a fall of coal.

January 4. Conrade Snider, Chestnut Grove mine, Perry county, injured by a fall of slate.

January 4. Albert Raber, Rends No. 4 mine, Athens county, arm and chest bruised by a fall of coal.

January 9. Morrison Crawford, Somers mine, Hocking county, back injured by being caught between motor and top.

January 16. Fred Mulheim, Somerdale No. 2 mine, Tuscarawas county, injured by a fall of coal.

January 18. Patrick Freil, Milton No. 1 mine, Jackson county, both limbs injured by a fall of slate.

January 20. Jim Spence, Black Diamond mine, Belmont county, upper lip and nose broken by a fall of stone.

January 20. Clarence Hodgson, Massillon Standard mine, Stark county, leg broken by mine car running on him.

January 23. Mike Shosheck, Long Run mine, Jefferson county, leg broken by a fall of slate.

January 26. Wm. McCallister, Taggart's mine, Belmont county, foot injured by a fall of stone.

January 27. Lewis Jones, Jr., Phoenix No. 2 mine, Athens county, leg sprained and bruised by a loaded mine car.

January 29. John Kenedy, New Greenville, Stark county, leg broken by a fall of coal.

January 30. Caleb Whitaker, Louisville Brick & Tile Co.'s mine, Adams county, injured by a premature explosion.

FEBRUARY.

February 2. Joseph Hartman, Minglewood No. 4 mine, Stark county, leg broken and otherwise injured by a premature explosion.

February 3. Peter Engel, Fox Lake mine, Summit county, body and leg injured by a fall of drawslate.

February 8. Clem Simbler, Warwick No. 1 mine, Stark county, leg and foot injured by a mine car jumping the track.

February 12. Andrew Roda, Maple Hill mine, Belmont county, back and leg injured by a fall of slate.

February 13. Sipor Ballars, Spring Valley mine, Perry county, leg and spine injured by a fall of draw slate.

February 13. Adam Christian, Fluhart No. 1 mine, Jackson county, rib broken by a fall of coal.

February 13. James Raferty, Conesville No. 4 mine, Coshocton county, leg cut while firing a shot.

February 15. H. H. Bailey, Brush Fork No. 2 mine, Hocking county, leg broken while riding on a mining machine.

February 15. David Evans, Ada No. 2 mine, Jackson county, leg broken by a fall of slate.

February 16. Al Vance, Nicholson mine, Guernsey county, foot injured by a fall of coal.

February 21. Joseph Staley, Lost Run No. 4 mine, Hocking county, leg broken by a fall of rock.

February 21. M. O'Riley, Lost Run No. 4 mine, Hocking county, hip broken and head cut by a fall of rock.

February 22. Roy Gabriel, Chauncey mine, Athens county, leg broken by a fall of slate.

February 23. Creig Wilson, Keystone mine, Perry county, ankle sprained by a fall of coal.

February 24. David Burnett, Hartford mine, Guernsey county, hips injured by a fall of coal.

February 25. John Lambert, Klondike mine, Guernsey county, foot injured by mine cars.

February 26. Arthur Seales, Dickson ton mine, Perry county, hand mashed by a railway car.

February 28. Hugh Hoag, Rend's No. 4 mine, Athens county, leg broken by falling from a mine car.

MARCH.

March 1. Wm. Charleston, Spring Valley mine, Perry county, leg broken by a fall of slate.

March 1. Gust Lorenze, Wainwright No. 4 mine, Tuscarawas county, leg broken by falling from a mine car.

March 2. Harvey Meiser, Lake Erie No. 1 mine, Stark county, foot injured by a fall of slate.

March 5. Thos. Deighton, Brookfield mine, Stark county, foot injured by a fall of coal.

March 9. Carroll Pinson, Milton No. 2 mine, Jackson county, leg broken by a fall of drawslate.

March 9. Geo. Harriet, Elm Run No. 3 mine, Stark county, leg broken by a fall of rock.

March 10. Caliph Gilron, West Floodwood mine, Athens county, injured by a fall of slate.

March 12. H. Wickam, Imperial mine, Guernsey county, collar bone broken by being caught between rib and car.

March 12. Edwin Dixon, Minglewood No. 3 mine, Stark county, back injured by a fall of coal.

March 16. Richard Davies, Hutson No. 4 mine, Portage county, rib fractured by a fall of slate.

March 17. John Polaski, Central mine, Guernsey county, hips injured by a fall of coal.

March 20. Wm. Curtis, Chestnut Hill mine, Coshocton county, head injured by a shot blowing through a rib.

March 23. Lewis Gibler, Snake Hollow mine, Hocking county, collar bone and leg broken by a fall of coal.

March 23. Thos. Cooper, Sand Run No. 1 mine, Hocking county, hand mashed by a fall of coal necessitating amputation.

March 25. John Radcliffe, Price mine, Jackson county, hand injured by being caught by a mine car.

March 26. Samuel Parker, Pittsburg mine, Belmont county, leg broken by a fall of roof coal.

March 26. Jas. Nelis, Wagoner's mine, Medina county, injured by a fall of coal.

March 27. Wm. Dixon, Somerdale No. 1 mine, Tuscarawas county, leg injured by being run over by mine cars.

March 28. John Strong, Tom Corwin No. 2 mine, Jackson county, hand mashed by a fall of slate.

March 29. Steve Turk, Maple Hill mine, Belmont county, back and hips injured by a fall of slate.

APRIL.

April 2. C. Bush, Charter Oak mine, Meigs county, rib broken by falling under mine car.

April 3. Dink Goins, Black Diamond mine, Athens county, leg mashed by a horse falling on him.

April 3. Sam Collins, Black Diamond mine, Athens county, foot crushed by a water box jumping from the track.

April 5. Henry Wetsel, Congo No. 1 mine, Perry county, foot injured by mine car.

April 6. Lawrence Szabe, Boggs mine, Belmont county, injured by a fall of stone.

April 6. Andy Koswoski, Dillon No. 2 mine, Jefferson county, back injured by a fall of soapstone.

April 7. Jacob Brahm, Warwick mine, Stark county, hip injured by a fall of slate.

April 7. Henry Johns, Singer mine, Stark county, skull fractured by coal falling down the shaft.

April 12. Geo. Rhenlinton, Hernbrook mine, Stark county, leg and ankle injured by bearing in of coal.

April 15. Pearl Tedrow, Minker Run mine, Athens county, hand crushed by a fall of coal.

April 16. John Richards, Young's Shaft mine, Stark county, face and arms burned by gas.

April 17. Wilson Anderson, Superior No. 5 mine, Jackson county, arm broken by a fall of slate.

April 17. John Sheneski, Long Run No. 2 mine, Jefferson county, foot injured by a fall of slate.

April 24. Hiram McCarty, Scott mine, Tuscarawas county, leg broken by a fall of slate.

April 27. W. B. Lepage, Imperial mine, Guernsey county, rib broken by being kicked by a mule.

April 28. Evan Zeigler, Central mine, Stark county, leg broken by cage falling.

April 28. Wm. Johnson, No. 21 mine, Perry county, leg broken by a fall of coal.

MAY.

May 5. Frank Haggans, No. 10 mine, Athens county, injured by being caught between mine cars.

May 5. Jesse Tackett, No. 4 mine, Athens county, arms and back burned by an explosion of powder.

May 7. August Kruskinki, Hern Brook mine, Stark county, back injured by a fall of stone.

May 8. Cal Conrad, Milton No. 3 mine, Jackson county, arm broken by a mine car jumping the track.

May 9. Frank Burns, New Castle mine, Lawrence county, back bruised by a fall of clay.

May 10. Benjamin Jones, Jr., Singer mine, Stark county, leg broken by a fall of coal.

May 12. Emery Coy, Lincoln mine, Columbiana county, burned by an explosion of powder.

May 12. Wm. Gonamore, Lincoln mine, Columbiana county, face and arms badly burned by an explosion of powder.

May 13. Basil Doretta, Wainwright No. 4 mine, Tuscarawas county, hips and back injured by a fall of slate.

May 19. Homer Walker, Pioneer mine, Guernsey county, leg injured by mine car on the slope.

May 21. Henry Reibold, Gaylord mine, Belmont county, knee injured by falling in front of trip.

May 22. Frank Coleman, Lost Run No. 4 mine, Hocking county, three fingers taken off by being caught in the cogs of a pump.

May 29. Benjamin Jones, Sr., Singer mine, Stark county, eye injured by being struck by a miner's pick.

May 31. John Mann, Haneter mine, Tuscarawas county, back and ankle injured by a fall of slate.

JUNE.

June 4. Mike Yevanets, Cherry Valley mine, Columbiana county, skull fractured and fingers broken by a premature explosion.

June 5. Chas. Dunch, Sand Run mine, Hocking county, leg broken by a fall of coal.

June 6. Stephen Stanley, Hartford mine, Guernsey county, hip injured by a fall of slate.

June 8. J. C. Thompson, Hartford mine, Guernsey county, foot injured by being caught between bumper and cars while riding on a loaded trip.

June 8. Michael Welsh, No. 8 mine, Perry county, ankle injured by a fall of drawslate.

June 12. K. S. Davis, Black Diamond mine, Belmont county, leg cut by a fall of stone.

June 13. Nicholas Huffman, Brookfield mine, Stark county, foot injured while sinking a new shaft.

June 15. Theodore Keller, New Greenville mine, Stark county, back and side injured by a fall of rock.

June 22. Frank Mullenkamp, Shawnee Valley mine, Perry county, leg crushed by a fall of slate.

June 25. Edson Netholson, No. 24 mine, Athens county, both legs broken by a fall of roof.

June 30. Chas. Lewis, Walhonding mine, Guernsey county, arm broken by a fall of slate.

JULY.

July 2. Karlman Madarasz, Maple Hill mine, Belmont county, ankle broken by a fall of slate.

July 2. Edward Butler, Orbiston mine, Athens county, arm broken by falling from the hopper.

July 2. Alva Sturgill, Carbondale No. 3 mine, Athens county, arm broken by mine car leaving the track.

July 2. Roland Howson, Carbondale No. 3 mine, Athens county, back injured by mine car leaving track.

July 6. Everet Tharp, No. 18 mine, Perry county, leg injured by being caught by mine cars.

July 9. John Doubledee, Eureka mine, Stark county, leg injured by a fall of rock, necessitating amputation.

July 10. L. Steenrod, Minker Run mine, Athens county, hip fractured by a fall of slate.

July 10. W. A. Bess, Lower Mine, Perry county, leg fractured by a fall of coal.

July 12. Howard Bullock, Brookfield No. 2 mine, Stark county, arm broken by a fall of rock.

July 12. Joseph Hughes, Pittsburg mine, Belmont county, hips and back burned by an explosion of powder.

July 14. Andy Pwoski, Long Run mine, Jefferson county, arm fractured by a fall of slate.

July 16. Wm. Tunnels, Black Diamond mine, Athens county, leg injured by a fall of soapstone.

July 17. Samuel Miller, Rock Run No. 3 mine, Perry county, ankle dislocated by attempting to stop a car.

July 17. Alf Hardin, Walhonding mine, Guernsey county, hip injured by mine cars colliding with another trip.

July 31. Wm. Russell, Sedalia mine, Athens county, leg broken by a fall of slate.

July 31. Burt Ray, No. 16 mine, Athens county, hips bruised by a fall of coal.

July 31. James Kennison, Raccoon mine, Vinton county, eye injured by flying coal.

AUGUST.

August 1. A. Carlson, Brush Fork No. 3 mine, Hocking county, leg broken by a fall of soapstone.

August 1. Calvin Gross, Spring Valley mine, Perry county, arm broken by a fall of coal.

August 6. Daniel Gooding, No. 21 mine, Perry county, leg broken by jumping from a mine car.

August 7. John Hollern, Rock Run No. 3 mine, Perry county, scalp cut and body bruised by a fall of slate.

August 8. Geo. Franco, Trail Run mine, Guernsey county, shoulder injured by falling in front of a loaded mine car.

August 9. James Ross, Belmont No. 2 mine, Belmont county, leg broken by a fall of slate.

August 15. Hy Lawrence, Rock Run No. 3 mine, Perry county, spine dislocated by a fall of top coal.

August 18. J. W. Fogle, Nail Mill mine, Belmont county, three ribs broken by a fall of slate.

August 20. Geo. Hardy, Hernbrook mine, Stark county, hip and finger injured by a fall of stone.

August 22. Scott Hull, Maple Hill mine, Belmont county, shoulder and leg injured by a fall of slate.

August 25. James Haynes, Little Kate mine, Guernsey county, ribs fractured by a fall of coal.

August 27. Hiram Sherrick, Lyonsdale mine, Perry county, ankle sprained by a fall of slate.

August 29. Robert Pax, No. 8 mine, Perry county, leg injured by a fall of coal.

August 30. Fred Whitmer, Woodland mine, Stark county, arm injured by being caught while dumping a mine car.

30. Dick Williams, Trail Run mine, Guernsey county, injured by being squeezed between mine cars.

SEPTEMBER.

September 3. Morgan Aubrey, Coal Ridge mine, Meigs county, back injured by a fall of coal.

September 4. Frank Nevick, Wheeling Creek No. 1 mine, Belmont county, ankle broken by a fall of soapstone.

September 7. Joseph Deible, Lost Run mine, Hocking county, leg broken by a fall of soapstone.

September 10. Wm. Brown, Minglewood No. 4 mine, Stark county, leg broken by a fall of rock.

September 10. Steve Inman, Coalgate mine, Hocking county, hip dislocated and leg broken by a fall of slate.

September 12. Chas. Kuleguska, Hernbrook mine, Stark county, palm of hand seriously injured by a nail.

September 13. Arthur Johnson, Minglewood No. 2 mine, Stark county, leg broken by fall of coal.

September 13. Alex Russell, Old Orchard mine, Guernsey county, arm broken by a fall of slate.

September 17. John Norman, Imperial mine, Guernsey county, leg and back injured by a mule falling on him.

September 18. Ben Walton, Fluhart No. 3 mine, Jackson county, injured by a fall of slate.

September 18. Daniel Ogg, Peacock mine, Perry county, seriously injured by a fall of slate.

September 19. M. C. Gregg, Imperial mine, Guernsey county, injured by a fall of slate.

September 22. Mathias Heffler, O. & W. Va. mine, Belmont county, leg broken by a fall of soapstone.

September 22. Chas. Gallas, Belmont No. 2 mine, Belmont county, face and head injured by a fall of roof.

September 25. August Blanket, Cherry Valley No. 4 mine, Columbiana county, face and breast injured by a premature explosion.

September 26. M. L. Robinson, Tom Corwin No. 1 mine, Jackson county, injured by being run over by a mine car.

September 27. Harley Turner, Alma mine, Jackson county, jaw fractured by slate and post falling upon him.

September 28. John Unger, King's mine, Guernsey county, leg broken by a fall of slate.

September 29. Thos. Lantz, No. 29 mine, Athens county, injured by being squeezed between mine cars.

OCTOBER.

October 1. John Tucker, Rara Avis mine, Athens county, hip dislocated by a fall of slate.

October 1. Aaron Smith, Black Diamond mine, Athens county, leg crushed by a fall of soapstone.

October 10. Al Mayer, West Massillon No. 3 mine, Stark county, leg broken by a fall of coal.

October 10. James Mullins, Fox Lake mine, Summit county, ankle seriously injured by being caught between mine cars.

October 11. Jerry Holl, Milton No. 2 mine, Jackson county, two ribs broken by a fall of drawslate.

October 12. Chas. Fulton, Fairfield mine, Columbiana county, collar bone broken by being caught between mine cars.

October 13. Geo. Loudermilk, Milton No. 3 mine, Jackson county, injured by being caught under a cage.

October 17. John Smith, New Crescent mine, Perry county, back injured by being knocked down by a mine car.

October 17. V. S. Hawk, Minker Run mine, Athens county, two ribs broken by a fall of coal.

October 18. Frank Tornsick, Wheeling Creek No. 1 mine, Belmont county, head and shoulder injured by a fall of slate.

October 19. S. Tippitt, Superior mine, Perry county, back and hip injured by a fall of slate.

October 20. Pearl Six, Daleton No. 1 mine, Athens county, hip dislocated by a fall of top coal.

October 21. Frank Rupert, Milton No. 3 mine, Jackson county, leg and side injured by the front jack slipping.

23. Lewis Hickman, Congo No. 2 mine, Perry county, back injured by a fall of coal.

October 23. W. Frazier, Crescent mine, Belmont county, wrist dislocated by being caught between mule and loaded car.

October 24. Trunic Russell, Daleton No. 1 mine, Athens county, leg injured by being caught between mine cars.

October 24. Ed. Robinson, Milton No. 3 mine, Jackson county, foot injured by a machine jack falling on it.

October 25. Vincent Zabo, Long Run mine, Jefferson county, seriously injured by a fall of coal.

October 25. Elgy Baker, Franklin No. 1 mine, Coshocton county, body bruised by a fall of coal.

October 26. Thos Corbett, 10 X mine, Athens county, ankle bruised by foot being caught between latch and curve rail.

October 27. Thomas Richardson, Keystone No. 1 mine, Perry county, ankle sprained by a fall of drawslate.

October 30. Joe Blankenchip, Milton No. 3 mine, Jackson county, foot seriously injured by striking it with his pick.

October 31. Alfred Hall, Jones & Morgan No. 3 mine, Jackson county, leg and back bruised by a fall of slate.

NOVEMBER.

November 2. David Evans, Sr., Wheeling Creek mine, Belmont county, hand injured by a fall of soapstone.

November 3. Ord Graham, Crescent mine, Belmont county, finger taken off by being caught in gear wheel.

November 5. Joseph Giffin, North Star mine, Athens county, arm broken by a fall of coal.

November 5. J. N. Colegrove, Hemlock No. 20 mine, Perry county, foot injured by fall of slate.

November 10. Wm. Howard, East Goshen No. 2 mine, Tuscarawas county, foot injured by a fall of coal.

November 12. Rob Moffit, Old Orchard mine, Guernsey county, two ribs broken by a fall of slate.

November 12. Frank Woods, Old Orchard mine, Guernsey county, hip injured by a fall of slate.

November 12. Chas. Johnson, Carbondale No. 2 mine, Athens county, ankle dislocated by being caught between car and chieve wheel.

November 13. Nicholas Bennett, Woodland mine, Stark county, thumb broken by a post falling.

November 13. Mile Brezar, Hartford mine, Guernsey county, head and arm injured by a fall of coal.

November 13. James Ray, Snow Hollow mine, Hocking county, two fingers taken off by being caught between belt and pulley.

November 13. Sam Star, Imperial mine, Guernsey county, leg injured by mine car jumping the track.

November 15. Joe Martin, Taggart's mine, Belmont county, ankle injured by a fall of coal.

MINOR ACCIDENTS.

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NOVEMBER.

November 16. John Featheringham, Woodland mine, Stark county, feet injured by a fall of coal.

November 23. Adam Garner, Woodland mine, Stark county, injured by being caught between car and roof.

November 23. Wm. Paul, Kelley mine, Lawrence county, fingers crushed by car running against a post.

November 24. Geo. Oglethorpe, Young's Shaft mine, Stark county, head cut by being thrown against a door frame while driving through.

November 24. West Mernanaway, Orbiston mine, Athens county, foot injured by cable reel falling on it.

November 27. John Coss, Gaylord mine, Belmont county, feet injured by a mine car jumping the track.

November 29. Wm. Corbett, Orbiston mine, Athens county, leg injured by a mine car jumping the track.

November 29. Samuel Birch, Gaylord mine, Belmont county, leg bruised by a fall of top coal and slate.

DECEMBER.

December 2. Robert Cole, Hutson No. 2 mine, Portage county, hips injured by being caught between mine cars.

December 20. Joseph Cummings, Keystone mine, Perry county, injured by lifting a rock.

December 27. John Dinalie, Elm Run No. 4 mine, Stark county, head injured by a premature explosion.

December 29. Allen Cooper, Superior No. 5 mine, Jackson county, knee bruised while uncoupling mine car.

December 29. Geo. Pollock, Minglewood No. 3 mine, Stark county, arm injured by being struck with coal from a flying shot.

JANUARY.

January 1. John Harris, Acorn Slope mine, Jackson county, foot injured by being caught between mine cars.

January 12. Clarence Acheson, Diamond No. 2 mine, Muskingum county, head and face cut by a fall of slate.

January 13. David Jones, Milton No. 2 mine, Jackson county, foot bruised by being caught by a mine car.

January 15. Pet Schramm, Belmont No. 2 mine, Belmont county, finger injured by spragging a mine car.

January 17. Thomas Loy, Glen mine, Belmont county, back and leg injured by mine cars.

January 18. Thomas Davis, New Greenville mine, Stark county, hand injured by mine car jumping the track.

January 23. Geo. Mace, Daleton No. 1 mine, Athens county, leg injured by an iron rail falling on him.

January 27. Geo. Russell, McNulty mine, Muskingum county, back injured by a fall of slate.

January 29. Tol Bradley, Price mine, Jackson county, finger mashed by being caught between mine cars.

January 29. Wm. Bell, Cherry Valley No. 4 mine, Columbiana county, finger mashed by shutting a latch.

January 29. Fred Johnson, Houk mine, Tuscarawas county, slightly injured between mine cars.

FEBRUARY.

February 1. Wm. Jaxon, 1st National mine, Columbiana county, side injured by drawing entry stumps.

February 1. Bert Applegarth, Crescent mine, Belmont county, toe broken by a fall of stone.

February 1. F. Bartel, Charter Oak mine, Meigs county, head injured by a mine car.

February 12. Willis Swyers, Brush Fork No. 3 mine, Hocking county, hips and back injured by a fall of drawslate.

February 14. George Williams, Hutson mine, Portage county, foot injured between mine cars.

February 16. Robert Rachmore, Wainwright No. 4 mine, Tuscarawas county, foot injured by a fall of coal.

February 16. Steve Bartlett, Wainwright No. 4 mine, Tuscarawas county, foot injured by a fall of coal.

February 20. James Shaw, Morgan Run No. 3 mine, Coshocton county, arm cut and side bruised by a fall of slate.

February 20. Hamon Mobly, Morgan Run No. 3 mine, Coshocton county, thumb mashed by a fall of coal.

February 24. Mike Vereb, Hartford mine, Guernsey county, foot injured by a fall of coal.

February 27. Chas. Beickley, No. 16 mine, Athens county, foot injured by being caught under cage.

February 28. John Hutchinson, Klondike mine, Medina county, head cut and injured by the break on the drum breaking.

MARCH.

March 1. Wm. Swindle, Rend's No. 4 mine, Athens county, back injured by falling between mine car and rib.

March 1. Morgan Burris, Echo mine, Belmont county, shoulder injured by falling from a mine car.

March 6. Jerry Holmes, New Crescent mine, Perry county, foot mashed by being caught between mine cars.

March 6. Fred Stromhimer, Syracuse Shaft mine, Meigs county, injured by a fall of slate.

March 12. Sam Campbell, No. 29 mine, Hocking county, injured by a fall of drawslate.

March 12. John Frazee, No. 29 mine, Hocking county, injured by a fall of drawslate.

March 14. Andrew Theil, Lake Erie No. 1 mine, Stark county, leg injured by a fall of drawslate.

March 15. Frank Eckenlagen, Sugar Creek mine, Tuscarawas county, foot injured by a fall of coal.

March 17. John Trekoisti, Central mine, Guernsey county, foot mashed by being caught by coal.

March 19. Lewis Rush, Lyonsdale mine, Perry county, foot injured by a mine car.

March 20. Samuel Owens, New Greenville mine, Stark county, head injured by a mine car.

March 24. Joseph Russell, Daleton No. 1 mine, Athens county, foot bruised by a mine car jumping the track.

March 24. Otis Hughes, Milton No. 2 mine, Jackson county, shoulder and side bruised by a fall of slate.

March 29. A. Telehorn, New Greenville mine, Stark county, leg injured by a fall of stone.

March 29. Frank White, Kings mine, Guernsey county, hips injured by being caught between loaded mine cars.

APRIL.

April 4. Walter Johnson, Imperial mine, Guernsey county, leg injured by being caught between rib and water box.

April 4. Jacob Yocum, Captina mine, Belmont county, toe mashed by a fall of drawslate.

April 12. Geo. Richards, Drake mine, Stark county, injured by a fall of slate.

April 18. Sandy Lewis, Boggs mine, Belmont county, head injured by a fall of stone.

April 21. Nin Savage, X10 mine, Athens county, finger mashed by a fall of slate.

April 23. James Reed, Central mine, Guernsey county, hips injured by being caught between mine cars.

April 23. John Dwarsack, Wheeling Creek mine, Belmont county, leg injured by being caught between car bumpers.

April 27. Jas. Arnold, Carbondale No. 2 mine, Athens county, two fingers mashed by being run over by a mine car.

April 28. James Carr, New Pittsburgh No. 2 mine, Hocking county, face injured by a fall of coal.

April 28. Robert Mooney, Phoenix No. 2 mine, Athens county, breast injured by being hit by a piece of coal from a flying shot.

MAY.

May 1. Frank Goins, No. 18 mine, Perry county, face and arms burned by a premature explosion.

May 7. J. Lud, Wheeling Creek mine, Belmont county, toe injured by a fall of coal.

May 11. Wm. Exline, Star No. 4 mine, Jackson county, neck and breast injured by a mine car.

May 16. Robert Rake, Hutson No. 4 mine, Portage county, foot injured by being caught between mine cars.

May 16. Earl Chalput, Klondike mine, Guernsey county, hand and arm injured by falling in front of a loaded mine car.

May 28. Geo. Jenkins, Crescent mine, Belmont county, hand injured by his partner's pick.

May 25. Henry Levering, Minker Run Mine, Athens county, head and shoulder injured by a fall of slate.

May 26. Oliver Mayhugh, Pittsburg mine, Belmont county, leg injured by motor running into an empty trip.

May 30. Scott Johnson, Minker Run mine, Athens county, hips and foot injured by a mine car running through latches.

JUNE.

June —. Wm. Noel, Pleasant Valley, Columbiana county, leg sprained by being run over by loaded mine cars.

June 1. Jacob Van Ferson, Minker Run mine, Athens county, finger injured by a falling post.

June 3. E. O. Beven, Wagoners mine, Medina county, foot injured by being caught under a mine car.

June 6. B. C. Sowers, Keystone mine, Perry county, injured by being caught between railroad cars and tippie.

June 7. Isaac King, Pittsburg mine, Belmont county, back injured by a fall of stone.

June 8. Del Smith, Federal Valley No. 1 mine, Athens county, face and hands injured by being burned by powder.

June 8. Thos. Medcliff, Federal Valley No. 1 mine, Athens county, face and hands injured by being burned with powder.

June 18. W. A. Davis, Wainwright No. 5 mine, Tuscarawas county, foot injured by being run over by mine cars.

June 20. Henry Steinblink, Sand Run mine, Hocking county, leg bruised by a fall of coal.

June 20. Frank Pyle, Black Diamond mine, Athens county, arm injured by being caught in an electric pump.

June 22. John Shrader, Minglewood No. 3 mine, Stark county, back injured by a fall of stone.

June 23. Albert Wooten, Fluhart No. 1 mine, Jackson county, legs injured by a premature explosion.

June 27. John Radcliff, Price mine, Jackson county, finger injured by being caught between end gate and car.

JULY.

July 2. Christ Betts, Carbondale No. 3 mine, Athens county, back injured by mine car leaving the track.

July 13. Peter Morrison, No. 24 mine, Athens county, injured by mine cars.

July 17. E. W. Lewis, Furnace No. 2 mine, Perry county, leg injured by a fall of roof.

July 20. J. O. Harper, Imperial mine, Guernsey county, hand injured by being caught between mine cars.

July 29. Frank Rhodes, Superior No. 6 mine, Jackson county, shoulder injured by a falling post.

AUGUST.

August 1. N. Dickerson, Imperial mine, Guernsey county, face cut by a fall of slate.

August 1. Harry Laurent, Wheeling Creek No. 1 mine, Belmont county, arm injured by falling from a mine car.

August 2. Frank Tuffarel, Dillon No. 2 mine, Jefferson county, hand injured by a fall of slate.

Imperial mine, Guernsey county, hand injured by

August 2. Louis Telawli, Trail Run mine, Guernsey county, back injured while riding on a mine car.

August 4. Wm. Coneybeer, Morgan Run No. 3 mine, Coshocton county, leg injured by a fall of rock.

August 7. Archie Maxwell, Spring Valley mine, Perry county, leg injured by a fall of slate.

August 10. Cornelius Jackson, Wheeling Creek No. 1 mine, Belmont county, two fingers injured by being caught in tail chain.

August 20. James Fletcher, Hernbrook mine, Stark county, back injured by a fall of stone.

August 20. Geo. Jekes, New Greenville mine, Stark county, injured by mine cars jumping the track.

August 22. Doc Vititoe, Price mine, Jackson county, back bruised by a fall of slate.

August 23. Joseph Luke, No. 18 mine, Perry county, finger injured by a railway car.

August 27. A. C. Springer, Mingo mine, Perry county, head and shoulder injured by a fall of coal.

SEPTEMBER.

September 1. Wm. Karsmer, Morgan Run No. 3 mine, Coshocton county, thumb injured while coupling mine cars.

September 8. Jack Marks, Milton No. 3 mine, Jackson county, ankle sprained by being caught in the cage.

September 10. R. Lewis, Imperial mine, Guernsey county, foot injured by a fall of slate.

September 12. Niles Stanbury, Walhounding mine, Guernsey county, ankle sprained by stepping from a mine car.

September 15. Wm. Lamb, No. 16 mine, Athens county, neck and shoulder burned by a premature explosion.

September 15. Rees Harris, Phoenix No. 2 mine, Athens county, finger injured by being caught between mine car and top.

September 18. Ed. Allender, Old Orchard mine, Guernsey county, foot injured by car bumper.

September 18. Herbert Harrier, New Crescent mine, Perry county, hand caught between mine cars.

September 21. Frank Wooten, Wellston No. 3 mine, Jackson county, back injured by a fall of slate.

September 22. Willie Gray, No. 21 mine, Perry county, two fingers mashed by a fall of slate.

September 24. John Smith, New Crescent mine, Perry county, foot injured by running a nail in it.

September 24. Jacob Rhodes, New Crescent mine, Perry county, toe mashed by a fall of coal.

September 26. Frank Withkamp, Congo No. 2 mine, Perry county, leg injured by a fall of slate.

September 27. John Sandrey, Wainwright No. 4 mine, Tuscarawas county, head cut and chest bruised by a fall of slate.

September 28. Owen Jones, Woodland mine, Stark county, knee injured by being caught between tail chain and mine car.

September 28. Ed. Leihe, Mobile mine, Wayne county, leg injured by a fall of stone.

September 29. W. M. Meredith, Imperial mine, Guernsey county, back injured by a fall of slate.

September 29. John Secora, Crescent mine, Belmont county, injured by jumping in an empty mine car while in motion.

OCTOBER.

October 1. Amos Nickles, Rara Avis mine, Athens county, body bruised by a fall of slate.

October 3. Ike Woolfem, Superior No. 3 mine, Jackson county, face injured by firing two shots at once.

October 5. Oliver Ushman, Pittsburg mine, Belmont county, shoulder and back injured by a fall of drawslate.

October 6. W. H. Wilson, Keystone mine, Perry county, thigh bruised by a fall of drawslate.

September 10. John Smith, Congo No. 2 mine, Perry county, back and leg injured by mine car running over him.

October 13. Geo. Williams, Hudson No. 4 mine, Portage county, back injured by a fall of slate.

October 13. R. B. Sowers, Keystone mine, Perry county, burned by steam from engine.

October 13. Howard Davis, Milton No. 3 mine, Jackson county, arm injured by being caught between roof and machine.

October 15. Frank Belby, Belmont No. 2 mine, Belmont county, foot injured by being caught in a treg.

October 16. J. Hammond, Imperial mine, Guernsey county, foot injured by a fall of slate.

October 18. Ed. McCauley, Imperial mine, Guernsey county, foot injured by being run over by a mining machine truck.

October 21. Llewellyn Jenkins, Hutson No. 2 mine, Portage county, foot injured by a fall of slate.

October 22. Wm. Griffith, Hutson No. 4 mine, Portage county, head injured by a fall of drawslate.

October 22. Loy Majors, Crescent mine, Belmont county, arm injured by empty mine cars.

October 24. James Kinney, Lyonsdale No. 2 mine, Perry county, knees injured by a shot blowing through the rib.

October 26. Geo. Stanford, West Massillon No. 3 mine, Stark county, hip and back injured by a fall of drawslate.

October 26. Nelson Jenkins, Star No. 4 mine, Jackson county, third finger mashed by being caught in a mining machine.

October 29. Marion Bonifant, Keystone mine, Perry county, ankle sprained by being caught between mine cars.

October 30. Harvey Lehu, Trenton mine, Tuscarawas county, foot injured by a fall of coal.

October 30. Walter Liddle, Glen mine, Belmont county, breast and leg injured by mine cars getting loose on the slope.

October 31. Wm. Leeshman, Heatherington mine, Columbiana county, shoulder injured by a fall of coal.

October 31. Geo. Reeves, Walhounding mine, Guernsey county, hips injured by falling under a mine car.

NOVEMBER.

November 3. Wayne Hallem, Cawthorn mine, Hocking county, foot injured by a fall of coal.

November 4. Andy Dickman, Greenville mine, Stark county, back injured by a fall of slate.

November 5. Ed. Devlin, Jr., Congo No. 1 mine, Perry county, head injured by a fall of coal.

November 7. Chas. Street, Glen mine, Belmont county, foot injured by a mine car.

November 7. Thos. Hoon, Daleton No. 2 mine, Athens county, leg injured by being caught by a mine car.

November 8. John Skalski, Klondike mine, Guernsey county, back and hip injured by a fall of slate.

November 15. James Clendenning, Wade mine, Coshocton county, ankle sprained by a mule falling on it.

ELMER G. BIDDISON,
Chief Inspector of Mines, Columbus, Ohio.

FIRST DISTRICT

Comprises the counties of Hocking, Jackson, Scioto and Vinton.

SAMUEL LLEWELLYN, Inspector,
Coalton, Jackson county, Ohio.

Succeeded by R. M. Mason, Logan, Hocking county, Ohio.

SECOND DISTRICT

Comprises the counties of Athens, Gallia, Lawrence, Meigs and Washington.

D. H. WILLIAMS, Inspector,
Glouster, Athens county, Ohio.

THIRD DISTRICT

Comprises the counties of Muskingum, Morgan, Noble and Perry.

D. B. WILSON, Inspector,
Corning, Perry county, Ohio.

FOURTH DISTRICT

Comprises the counties of Monroe, Belmont, Harrison and Jefferson.

THOMAS MCGOUGH, Inspector,
Bridgeport, Belmont county, Ohio.

FIFTH DISTRICT

Comprises the counties of Guernsey, Coshocton and Tuscarawas.

W. H. TURNER, Inspector,
Cambridge, Guernsey county, Ohio.

SIXTH DISTRICT

Comprises the counties of Carroll, Columbiana, Mahoning, Trumbull and Portage.

JAMES P. DAVIS, Inspector,
Dell Roy, Carroll county, Ohio.

SEVENTH DISTRICT

Comprises the counties of Medina, Stark, Summit, Wayne and Holmes.

WM. K. MOORE, Inspector,
North Lawrence, Stark county, Ohio.
Succeeded by W. H. Miller, Massillon, Stark county, Ohio.

REPORT OF SAMUEL LLEWELLYN,

Inspector of the First District from November 15, 1899, to May 19, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus Ohio:

DEAR SIR: — I have the honor of submitting to you a report of the mines of the First District for the term beginning November 15, 1899, and ending May 19, 1900. During this period work at the mines was fairly good, and all were employed. Permanent improvements were few, but calls for repairing brattices and perfecting airways, continuous. In most of the mines these improvements were required at almost every visit, and in most cases were readily undertaken.

Fatal accidents, full details of which will be found in the report which follows, were more numerous than usual, yet in not one of these instances was there a possibility of prevention except by the deceased. They were errors of judgment for which they were called to pay the heavy penalty.

In my intercourse with miners and operators, I have been treated with such courtesy as to make it pleasure to try and serve them. I am also indebted to the chief inspector for favors that have helped me in seeking to carry on the work of the district inspector.

I heartily wish you, sir, and the force on your staff, success in carrying out the beneficent purpose of the state.

I am cordially yours,

SAMUEL LLEWELLYN,
Inspector First District.

Coalton, Ohio, May 19, 1900.

HOCKING COUNTY.

LOST RUN

Is located on the Monday Creek branch of the C., H. V. & T. Railway, and is operated by the Buckeye Coal & Railway Co. John M. Roan was superintendent, and Lou McDaniel was mine boss. It is a drift opening into the No. 6 seam of coal, which is from 6 to 10 feet in thickness. It is worked on the double entry system, and has fan ventilation. The coal is cut by machines operated by electricity, and tail rope haulage is used. Two hundred and four miners and fifty-five day hands were employed. The ventilation here was materially interfered with, because of crevices caused by falls in abandoned territory. Measures were taken to correct this fault, and at the close of the term a more powerful fan was to be put in place.

COALGATE

Is situated at the terminus of the Snow Fork Branch of the C., H. V. & T. Railway, and is operated by the Somers Coal Co. Z. Williams is the superintendent, and Anthony Riggs is the mine boss. It is a drift opening into the No. 6 seam of coal, which is here from 3 to 10 feet in thickness. It is worked on the double entry system, and is ventilated by exhaust fan. Coal cutting is wrought by machines operated by electricity. One hundred and thirty miners and forty-three day hands were employed. A fault is closing in the greater portion of this mine. In the northwest there was a fair prospect for coal. This section was poorly ventilated. Improvements were ordered.

NEW PITTSBURG NO. 1

Is located near the terminus of the Brush Fork Branch of the C., H. V. & T. Railway, and is operated by the New Pittsburg Coal Co. It was formerly known as the No. 7. James R. Birkbeck is superintendent and George Butts mine boss. It is a drift opening into the No. 6 seam of coal, which is here about six feet in thickness. It is conducted on the double entry system, and is ventilated by means of a fan. Machines operated by compressed air were used to cut the coal. Tail rope haulage was in use. One hundred and twenty-nine miners and thirty-two day hands were employed. Unnecessary leakages in the brattices caused frequent deficiencies in the ventilation. The attention of the management was forcibly called to this defect, and measures were taken to remedy this state of affairs. On December 14 the scales were tested, and in the main found correct. The lower end of the platform was found to bind on a full burden; this was corrected.

NEW PITTSBURG NO. 2

Consists of two mines formerly known as the No. 8 and No. 9, and are located at the terminus of the Brush Fork Branch of the C., H.

V. & T. Railway, and are operated by the New Pittsburg Coal Co. James R. Birkbeck was superintendent, and Wm. Embleton and Wm. Slater successively mine bosses. They are drifts into the No. 6 seam of coal which is here from six to seven feet in thickness. They are conducted on the double entry system, and are ventilated by means of fans. Machines operated by electricity are used to cut the coal. In former No. 8 mine, on the east side of the valley, 85 miners and 30 day hands were employed; in the No. 9 mine, on the west side of the valley, 87 miners and 28 day hands were employed. Tail rope haulage is in use at both of these mines. Pillars are being drawn in each of these mines, and the end is not far distant.

NEW PITTSBURG NO. 3

Is located at Consol on the Brush Fork Branch of the C. H. V. & T. Ry., and is operated by the New Pittsburg Coal Co. The superintendent is James R. Birkbeck, and Wm. Slater and Wm. Embleton successively mine bosses. It is a drift opening into the No. 6 seam, which is here about six feet in thickness. The double entry system is in vogue here, and an exhaust fan furnishes the ventilation. Machines operated by electricity are used to cut the coal, and tail rope haulage is in use. One hundred and twenty-one miners and thirty-seven day hands are employed. The ventilation was at times deficient, caused by the exhaust getting much of its supply from abandoned workings, and inadequately kept machinery to propel the fan. Efforts were made to remedy this defect, as well as frequent strengthening of the brattices that had been permitted to divert the passage of the current from the face of the workings. On February 21 the scales were tested and found them weighing accurately.

NEW PITTSBURG NO. 5

Is located at Buchtel, on the Snow Fork Branch of the C., H. V. & T. Railway, and is operated by the New Pittsburg Coal Co. Henry Johnson is superintendent, and John Huddy mine boss. This is a drift opening into the No. 6 seam of coal, which is here from 4 to 5½ feet in thickness. It is conducted on the double entry system, and is ventilated by an electric fan located in the mine. One hundred miners and thirty-two day hands are employed. Machines operated by electricity are used to cut the coal, and tail rope haulage is in use. Faulty coal and roof somewhat interfered with the ventilation. Most of this section, however was being abandoned. Brattices were found defective, but were corrected on requirement.

NEW PITTSBURG NO. 6

Is located at Cawthorn, on the Monday Branch of the C., H. V. & T. Railway, and is operated by the New Pittsburg Coal Co. James R. Birkbeck and Hugh Dalrymple were successively superintendents, and John Murphy and James Johnson were successively mine bosses. It con-

sists of two drift mines, one on each side of the valley, into the No. 6 seam of coal. It is conducted on the double entry system, and has fan ventilation on each side. One hundred and eighty-nine miners and fifty-six day hands were employed. Preparations were being made for motor haulage. The mine was in fair condition. Scales were tested on February 21 and found accurate.

NEW PITTSBURG NO. 7

Is a new mine being opened near Murray City, on the Snow Fork Branch of the C., H. V. & T. Railway, and is to be operated by the New Pittsburgh Coal Co. Fourteen men were employed in opening the cross entries, from which the main entries will be driven north. The coal gives promise of being from five to seven feet in thickness.

NO. 29

Is located at Murray City on the Snow Fork Branch of the C., H. V. & T. Railway, and is operated by the Greendale Furnace Co. J. W. Miskell is the superintendent and mine boss. It has been worked on the double entry system, and has at present furnace ventilation. It is a drift into the No. 6 seam of coal which is here from six to eight feet in thickness. Twenty-five miners and five day hands were employed. The pillars of the mine were being systematically drawn. It is likely to furnish coal for a year or two to come.

NO. 15

Is located at Sand Run on the Monday Creek Branch of the C., H. V. & T. Railway, and is operated by the Jacoby Coal Co. Geo. Jacoby was superintendent and mine boss. It is a drift opening into the No. 6 seam of coal, which is here from six to eight feet in thickness. It is conducted on the double entry system, and is ventilated by a fan operated by compressed air. Sixty miners and sixteen day hands were employed. The fan in use is a small one, and in order to furnish the required current must be kept at its maximum power. The coal is cut by machines operated with compressed air.

MORRIS NO. 1

Is located at Sand Run on the Monday Branch of the C., H. V. & T. Railway, and is operated by the Buckeye Coal and Railway Co. J. H. Winder is the superintendent, and Adam Laverty is mine boss. It is a drift opening into the No. 6 seam of coal, which is here from four to six feet in thickness. It is worked on the double entry system, and is ventilated with a fan. Machines operated by electricity are used to cut the coal. Tail rope haulage is in use. Eighty-four miners, and twenty-five day hands were employed. This mine is well ventilated, but the condition of the coal, and the roof are such that on my last visit on March 14 it was problematical whether the excavation of coal would long continue.

MORRIS NO. 2

Is located at Jobs, on the Brush Fork Branch of the C., H. V. & T. Railway, J. H. Winder being superintendent and Edward Fluke mine boss, with Wm. Powers as assistant mine boss. This is a drift mine into the No. 6 seam, which is here from six to seven feet in thickness. It is conducted on the double entry system, and is ventilated by means of a fan. The coal is cut by machines, and tail rope haulage is in use. Two hundred and fifty-one miners and seventy-two day hands were employed. This mine is extensive in territory, and requires the maximum powers of the fan to produce sufficient ventilating current, which is fairly distributed. Conditions were fair.

MORRIS NO. 3

Is located at Jobs, on the opposite side of the valley from the No. 2 mine, and is operated by the same company, and under the same management with Joseph Smith as assistant mine boss. It is a drift opening into the No. 6 seam of coal, which is here from three to eight feet in thickness. This is also an extensive mine, worked on the double entry system, and is ventilated with one fan. The coal is cut with machines, and rope and motor electric haulage are in use. Two hundred and forty-eight miners and seventy-four day hands are employed. This mine is fairly cared for, but it would be an improvement if two currents of air were provided for the thorough ventilation of the mine. On February 4, at 10 o'clock p. m., James Evans, a machine man, was injured by a fall of rock. They were employed in cutting a siding on the sixth north entry north of thirteenth west entry, and had cut about two feet of the twelfth run, when the face of the coal and rock above it gave way, the rock sliding off the coal and crushing the deceased to the ground, causing his head to rest on the chain of the machine, and before the power could be cut off was struck several times by the wrist of the piston. The survivors state that a few moments before the accident occurred their attention was called to the rock by the dribbling of fine clay coming from the partings whereupon they tested the rock and thought it solid. Mr. Evans did not regain consciousness, but died on the afternoon of February 6, 1900.

BEATTIE BROS.

Is located near Buchtel on the Snow Fork Branch of the C., H. V. & T. R'y, and is operated by the Beattie Bros. James Beattie is in charge. It is a drift opening into the No. 6 seam of coal, which is here about six feet in thickness. It is worked on the cutoff system, taking the entries of the old mine as a base. Seventeen miners and three day hands are employed. Natural ventilation is depended upon, a second opening having been made to drain the mine as well as to increase the ventilation.

BLACK DIAMOND

Is located near Haydenville, and is operated by the Haydenville Mining and Manufacturing Co. J. W. Jones is the superintendent, and E. Lehman is the mine boss. It is a drift opening into the No. 6 seam of coal, which is here from three to six feet in thickness. The single entry system is in vogue, and the ventilation is natural pressure. Eighteen miners and three day hands are employed. Conditions were ordinary.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	No. of Miners.	P. O. Address.
Kistler	Drift	John Kistler	7	Longstreth.
Evans	"	Wm. E. Evans	2	Carbon Hill.
Greens	"	Thomas Greene	1	"
Coe	"	Dennis Coe	2	"
Smith	"	John Smith	2	"
Lama	"	J. M. Lama	3	Nelsonville.
Cohagan	"	Cohagan & Achauer	3	Haydenville.
Saunders	"	Flaval Saunders	2	"
Williams	"	Warren Lehman	2	"
CLAY MINES.				
Cotton Allen	Drift	Haydenville M. & M. Co.	7	Haydenville.
Union Furnace	"	Columbus B. & T. C. Co.	10	Union Furnace.

JACKSON COUNTY.

WAINWRIGHT

Is located east of Wellston on the C., H. & D. Railway, and is operated by the Wainwright Coal Co. George Harrison is superintendent and Wm. Harrison mine boss. This is a shaft 95 feet in depth to the No. 2 seam of coal which is here from two to four and one-half feet in thickness. It is conducted on the double entry and cutoff systems, and has fan ventilation. Seventy-nine miners and thirty-seven day hands were employed. There are traces of marsh gas on the north, east and west sides. At present the north entry is dipping with no gas present. The ventilating current is at times weak, owing to the presence of leaks. Some diligence is used to correct this defect, and there is promise of an abundant supply.

FLUHART NO. 1

Is located in South Wellston on the B. & O. S. W. and C., H. V. & T. Railway, and is operated by the Fluhart Coal Co. Theodore J. Fluhart

is the superintendent, and David Powell is mine boss. It is a shaft eighty feet in depth into the No. 2 seam of coal, which is here from thirty to forty inches in thickness. It is conducted on the double entry system and has fan ventilation. One hundred and twenty-eight miners and fifty-two day hands were employed. The ventilation of the mine was more favorable than before, a good outlet having been secured in the Comet mine. On December 7, at 4 p. m., Charles Gray was found dead in his room covered with coal that had come from a shot fired in the east rib. His shot had evidently exploded prematurely and caught him nearby. The conjecture was that the squib was defective.

FLUHART NO. 2

Is located southeast of Wellston on the C., H. & D. and C., H. V. & F. Railways, and is operated by the Fluhart Coal Co., of which T. J. Fluhart is superintendent, and Victor Sullivan is mine boss. It is a shaft 10 feet deep into the No. 2 seam of coal, which is here from 32 to 40 inches in thickness. It is worked on the double entry system and has fan ventilation. Tail rope haulage is used here. Sixty miners and 36 day hands are employed. The main entry has been opened through crush, and the development of the southeast section has been begun. The air current was weak owing to the leakage in the airway. Some diligence was used to correct defects. On my last visit, May 10, it was agreed to secure additional inlet from the main shaft to increase the volume and pressure owing to the smallness of the area of the airway from the fan to the shaft.

FLUHART NO. 3

Is located east of Wellston on the B. & O. S. W. Railway, and is operated by the Fluhart Coal Co. T. J. Fluhart is superintendent and Eli Gent is mine boss. It is a shaft 80 feet deep into the No. 2 seam of coal which is here from two to four feet in thickness. It is worked on the double entry system, and has fan ventilation. Fifty-nine miners and thirty day hands are employed. Work is limited to the south and the southeast section, except that one entry is being driven on the north, prospecting the coal being small. Ventilation on the south side has been weak. Changes were made with good results. At my last visit on May 2, the airway was found to be in a bad condition, and measures were taken to place it in good order. Traces of marsh gas are slight. All entries to the south have been driven to the end, only room work proceeding.

MILTON NO. 1

Is located in Wellston on the B. & O. S. W. Railway, and is operated by the Milton Coal Co. T. J. Morgan being superintendent and George Davis mine boss. It is a shaft 76 feet deep to the No. 2 seam of coal which is here about four feet in thickness. It was conducted on the

double entry system, and has fan ventilation. Fifty-four miners and twenty-nine day hands are employed. This mine is nearing exhaustion and the number of men employed will steadily decrease.

MILTON NO. 2

Is adjacent to the Milton No. 1 mine, and is operated by the Milton Coal Co. T. J. Morgan is superintendent and Wm. Montgomery is mine boss. It is a shaft 76 feet deep into the No. 2 seam of coal which is here from three to four feet in thickness. It is worked on the double entry system, and has fan ventilation. One hundred and seventy-four miners and sixty-two day hands are employed. There were difficulties with the ventilation at various times, a large volume being received from the No. 3 mine. This was irregular, due to inattention. On my last visit there was a fair current except on the west side; they were expecting to cut into the No. 1 mine, which they have since done, and an increased current of air was secured.

MILTON NO. 3

Is located east of the Milton No. 2 mine, and is operated by the Milton Coal Co. D. Ritchie is superintendent, and Henry Shiers is the mine boss. It is a shaft opening into the No. 2 seam of coal, which is here from 34 to 40 inches in thickness. It is conducted on the double entry system, and has fan ventilation. The west entries of this mine is connected with the No. 2 mine. One hundred and twenty-two miners and thirty-eight day hands are employed. This mine was fairly ventilated. It promises to exceed all others in the county in its daily output of coal.

WELLSTON NO. 3

Is located west of Wellston on a switch of the C., H. & D. Railway, and is operated by the Wellston Coal Co. D. Ritchie is the superintendent, and D. J. Harry, successor to Robert Pope, is mine boss. It is a shaft mine 87 feet in depth into the No. 2 seam of coal, which is here from three to four feet in thickness. It is worked on the double entry system and has fan ventilation. One hundred and forty miners and forty-nine day hands are employed. At my last visit made on May 5, the fourth east entry was weak in regard to ventilation, and a large swale was filled with water. They were requested to cease operation in that portion of the mine until improvements were made in the air current and in the drainage. The fan is located at the mouth of the fifth west entry, and produces a sufficient current of air, but leaks through the brattices, and dissipates before reaching the face of the entry. They were instructed to repair the brattices in order to bring the current to the face of the workings. On November 27, David Stewart, an entryman, was injured by a fall of slate in the cross cut at the head of the fourth east entry. He was loading coal out of the cross cut, and was aware of the dangerousness

of the slate, but he lingered too long and was overtaken. He died on November 28. James Nichols on the 8th of March, thinking that his squib had failed to explode his shot, was in the act of going back to replace it when it suddenly exploded, killing him instantly.

SUPERIOR NO. 1

Is located west of Wellston on the O. S. & C. H. & D. Railways, and is operated by the Superior Coal Co. H. C. Murphree is the superintendent, and W. J. Davis is mine boss. It is a shaft opening 100 feet in depth into the No. 2 seam of coal which is here from 33 to 42 inches in thickness. The mine is worked on the double entry system and is ventilated by a fan. One hundred miners and forty day hands are employed. The mine was well ventilated and kept in fair condition.

SUPERIOR NO. 2

Adjoins the No. 1 mine on the east. H. C. Murphree is the superintendent and Daniel J. Davis is mine boss. This is a shaft mine 85 feet in depth into the No. 2 seam of coal which is here from 34 to 42 inches in thickness. It is worked on the double entry system, and has fan ventilation. One hundred and fifteen miners and forty-nine day men are employed. The north side is fairly ventilated, but an improvement of the ventilation on the south side is a prime necessity, as an extensive tract of coal has been added to the plant.

SUPERIOR NO. 3

Is located northwest of Wellston on the B. & O. S. W. Railway, and is operated by the Superior Coal Co. O. B. Gould is superintendent, and John M. James is mine boss. This is a shaft 47 feet into the No. 2 seam of coal, which is here from 34 to 54 inches in thickness. The mine is conducted on the double entry system, and has fan ventilation. Two hundred miners and thirty-five day hands are employed. The maximum speed of the fan was required to properly ventilate this mine. This they aimed to do by employing fewer men during part of the term. On the morning of April 5, Jacob Tucker, who was working on the first southwest entry secured Andrew Willis and David E. L. Davis, two slate men, to clean up a recent fall of slate in his room. They were seen to go into Tucker's room. His next neighbor soon after hearing a heavy fall supposed they were pulling down loose slate. A short time after this the driver, in looking for a loaded car in Tucker's room and seeing no light, in company with another miner went forward and after searching found three men dead under the fall of slate.

SUPERIOR NO. 4

Is located at Ironton Junction on the C. H. & D. Railway and is operated by the Superior Coal Co. O. B. Gould is the superintendent, and F. M.

Hudson is mine boss. It is a shaft opening 77 feet deep into the No. 2 seam of coal, which is here from 30 to 37 inches in thickness. It is conducted on the double entry system, and has fan ventilation. Fifty-two miners and twenty-six day hands are employed. The ventilation here was ordinary and they were required to make their brattices air tight and clean out the airways. On March 26, Andrew Holzapel, while working in a skip entry on the sixth east loosening the coal from his shot at the face of the skip, when a slip developed and without warning a large mass of slate fell, crushing and killing him instantly.

SUPERIOR NO. 5

Is located at Coalton on the C., H. & D. Railway, and is operated by the Superior Coal Co. George Wheldon is the superintendent and Evan T. Davis is mine boss. This is a drift mine into the No. 2 seam of coal which at this point is from 15 to 45 inches in thickness. It is worked on the single entry system, and has fan ventilation. Seventy-three miners and thirty-six day hands are employed. This mine is nearing exhaustion and there will be employment for the men in the coming season in drawing pillars.

SUPERIOR NO. 6

Is located east of Wellston on the C., H. & D. and O. S. Railways, and is operated by the Superior Coal Co. O. B. Gould is the superintendent and Wm. Cooker is mine boss. This is a slope mine into the No. 2 seam of coal which is here from 34 to 48 inches in thickness. It is conducted on the double entry system, and has fan ventilation. Seventy-seven miners and thirty-four day hands are employed. This mine was fairly well cared for. Traces of marsh gas have been found here. A fire boss was required to visit these rooms before working hours, and the usual precautions taken.

ELIZA

Is located east of Wellston on the B. & O. S. W. Railway, and is operated by the Eliza Coal Co. Charles Weisman was in charge. It is a shaft 75 feet deep into the No. 2 seam of coal which is here from two to five feet in thickness. Lately it has been worked on the cutoff system, and is ventilated by means of a fan. In January thirteen miners and eight day hands were employed. Later the mine was abandoned, with the exception that they may during the summer draw some of the pillars that are within a short distance from the shaft.

COMET.

Is located west of Wellston, and is operated by the Comet Coal Co. Peter Gallagher is in sole charge. It is a shaft 68 feet deep into the No. 2 seam of coal, which is here from three to four feet in thickness. It is worked on the double entry system, and has fan ventilation. Thirty-five

miners and twenty-two day hands are employed. On the 18th of January Lewis Tyler, while working in the last room on the first entry removing some props to permit the slate men to sink the roadway, was struck by a slab of slate which killed him instantly.

ALMA

Is located near Glen Roy on the C., H. & D., and O. S. Ry., and is operated by the Alma Coal Co. C. K. Davis is the superintendent and George House is mine boss. It is a shaft opening into the No. 2 seam of coal to a depth of 72 feet. The coal at this point varies in thickness from 32 to 45 inches. It is worked on the double entry system, and has fan ventilation. 130 miners and 40 day hands are employed. There has been trouble with the ventilation here, but improvements have been effected, and in all probabilities continue to improve as the remote entries have all been exhausted.

ADA NO. 2

Is located near Glen Roy on the O. S. Ry., and operated by the Ada Coal Co. N. M. White is the superintendent, and J. C. Smith is mine boss. It is a shaft opening 110 feet in depth into the No. 2 seam of coal, which is here from 33 to 42 inches in thickness. It is worked on the double entry system, and has fan ventilation. 95 miners, and 34 day hands are employed. This mine is generally found in fair condition.

EMMA NO. 1

Is located in Altoona on the C., H. & D. and O. S. Ry., and is operated by the Emma Coal Co. Edwin Jones is superintendent, and Jesse Kinnison is mine boss. It is a shaft opening into the No. 2 seam of coal to a depth of 50 feet. The coal varies in thickness at this point from 30 to 36 inches. It is worked on the single entry system, and has fan ventilation. 7 miners and 3 day hands are employed. They were engaged in drawing the pillars.

EMMA NO. 2

Is located one-half mile north of Emma No. 1 mine on the O. S. Ry., and is operated by the Emma Coal Co. Edwin Jones is the superintendent, and August Ruff succeeded by Charles Rogers were mine bosses. It is a shaft opening 100 feet in depth into the No. 2 seam of coal which is here from 35 to 44 inches in thickness. It is conducted on the double entry system, and has fan ventilation.

100 miners and 36 day hands were employed. During the term the main airway was cleared of obstructions improving the ventilation. On March 3, the scales were tested and found correct. On April 23rd, John Sherman while working in a breakthrough in his room on the south-west entry was struck by a slab of slate and instantly killed. He seemed to be unconscious of any presence of danger at that point.

EMMA NO. 3

Is located on the Springfield switch of the O. S. Ry., and is operated by the Emma Coal Co., Edwin Jones is superintendent, and J. D. Richards is mine boss. This is a drift opening into the No. 2 seam of coal which is here from 24 to 39 inches in thickness. It is worked on the double entry system, and has furnace ventilation. 90 miners and 27 day hands were employed. The ventilation here was fitful because of carelessness in permitting the brattices to leak. On November 21st, notice was given them to improve matters by the 25th, or more drastic measures would be applied. On the last date the ventilation was improved one hundred and fifty per cent. Later on in the season a squeeze came over two entries disarranging matters badly, but they succeeded in counteracting it, thus enabling them to go forward indefinitely provided no further crush occurs.

TOM CORWIN NO. 1

Is located south of Glen Roy on the C., H. & D. and O. S. Rys., and is operated by the Tom Corwin Coal Co. S. J. Patterson is the superintendent, and Charles Trace is mine boss. It is a shaft opening 90 feet in depth to the No. 2 seam of coal which is here from 30 to 44 inches in thickness. It is worked on the double entry system, and has fan ventilation. 155 miners and 79 day hands were employed. Motors operated by electricity are in use for haulage purposes on the north and south sides. Conditions here are variable. A large and powerful fan is in use, but the airways require continuous attention in order to provide sufficient current of air in the working faces.

TOM CORWIN NO. 2

Is located northwest of Wellston on the B. & O. S. W. Railway, and is operated by the Machine Coal Co. Joseph Harper was in charge. It is a shaft opening into the No. 2 seam of coal which is here from 2 to 3½ feet in thickness. It is worked on the double entry system, and has fan ventilation. 31 miners and 14 day hands are employed. Machines operated by electricity are used to cut the coal, in the entries and rooms. Pick men were engaged in drawing pillars. Conditions here were ordinary.

STANDARD

Is located in Glen Roy on the C., H. & D. and O. S. Rys., and is operated by the Standard Coal Co. D. C. Jones is the superintendent, and Daniel Jones is mine boss. It is a shaft mine 85 feet in depth into the No. 2 seam of coal which is here from 2 to 3 feet in thickness. It is worked on the single entry system, and has fan ventilation. 28 miners and 14 day hands are employed.

NORTHERN

Is located west of Glen Roy on the C., H. & D. and O. S. Rys. and is operated by the Northern Coal Co. D. C. Jones is superintendent and Daniel Jones is mine boss. It is a shaft opening 45 feet deep into the No. 2 seam of coal which is here from 30 to 40 inches in thickness. It is worked on the single entry system, and has fan ventilation. 70 miners and 23 day hands were employed. The south side was suspended. This mine was fairly conducted.

JONES AND MORGAN NO. 3

Is located west of the Northern mine on the C. H. & D. and O. S. Rys., and is operated by Jones and Morgan. Moses Morgan is superintendent and David Jones is mine boss. It is a slope into the No. 2 seam of coal which is here from 32 to 40 inches in thickness. It is worked on the single entry system, and has fan ventilation. 50 miners and 16 day hands are employed. This mine is always found in good condition.

CENTRAL

Is situated midway between Coalton and Glen Roy on the O. S. R., and is operated by the Central Coal Co. David Armstrong being superintendent, and Sherman Walker mine boss. It is a slope opening into the No. 2 seam of coal which at this point is from 1 to 3 feet in thickness. It is worked on the single entry system, and has fan ventilation. In January 14 miners and 5 day hands were employed. Later on in the season the mine was abandoned and dismantled.

ACORN SLOPE

Is situated south of Glen Roy on the C., H. & D., and O. S. Rys., and is operated by the Jones Coal Co. John E. Jones is superintendent, and H. C. Chapman and George Bartels were successively mine bosses. It is a slope opening 400 feet in length to the No. 2 seam of coal, which is here from 30 to 40 inches in thickness. It is worked on the single entry system, and has fan ventilation. 60 miners and 24 day hands were employed. During the term the main airway was thoroughly cleaned and the brattices repaired to improve the ventilation.

JONES NO. 2

Is located on the Ada switch of the O. S. Ry., and is operated by the Jones Coal Co. John E. Jones is the superintendent, and Enos Miller is mine boss. It is a slope into the No. 2 seam of coal which is here from 30 to 37 inches in thickness. It is worked on the single entry system, and has fan ventilation. 55 miners and 22 day hands were employed. This mine is nearing exhaustion.

ENTERPRISE

Is located northwest of Wellston on the B. & O. S. W. Ry., and is operated by the Enterprise Coal Co. John E. Jones is the superintendent, and Charles Holmes is the mine boss. It is a shaft mine 56 feet deep into the No. 2 seam of coal, which is here from 29 to 32 inches in thickness. It is worked on the double entry system and has fan ventilation. 15 miners and 10 day hands are employed. Machines operated by electricity are used to cut the coal. Conditions here are fair.

BUCKEYE

Is located two miles west of Coalton on the C., H. & D. Ry., and is operated by the Buckeye Coal Co. Elmer Sell is the superintendent and mine boss. It is a drift mine into the No. 2 seam of coal, which is here from 2 to 4 feet in thickness. It is worked on the single entry system, and has furnace ventilation. 20 miners and 6 day hands are employed. Moderate conditions prevail here.

VICTOR NO. 1

Is located near Coalton on the C., H. & D., Ry., and is operated by T. J. Evans & Co. T. J. Evans is superintendent, and John Whiting is mine boss. It is a drift mine into the No. 2 seam of coal which is here from 2 to 3 feet in thickness. It is worked on the single entry system, and has furnace ventilation. 18 miners and 4 day hands are employed. Conditions were fair.

HIPPELS.

Is located at Coalton on the O. S. Ry., and is operated by the Hippel Coal Co. W. D. Hippel is superintendent, and James Gascoyne is mine boss. It is a slope mine into the No. 2 seam of coal which is here from 30 to 36 inches in thickness. It is worked on the single entry system, and has fan ventilation. 18 miners and 7 day hands were employed. They are engaged in drawing room and entry pillars.

COALTON NO. 3

Is located near Coalton on the O. S. Ry., and is operated by the Coalton Coal Co. Norris Cameron is the mine superintendent, and Edward Brohard is mine boss. It is a slope opening into the No. 2 seam of coal which is here from 28 to 36 inches in thickness. It is worked on the single entry system, and has furnace ventilation. 24 miners and 10 day hands are employed. They were engaged in drawing room and entry pillars.

SPRINGFIELD

Is located on the Springfield switch of the O. S. Ry., and is operated by the Chapman Coal Co. John E. Hayes is the superintendent, and Wm.

Eisnagle is the mine boss. It is a shaft opening 50 feet deep into the No. 2 seam of coal which is here from 32 to 40 inches in thickness. It is conducted on the single entry system, and has fan ventilation. 65 miners and 36 day hands are employed. Machines operated by electricity are used to cut the coal.

GRACE

Is located on the Ada switch of the O. S. Ry., and is operated by the Chapman Coal Co. John E. Hayes is the superintendent, and Edmund Gregory is mine boss. It is a shaft 96 feet in depth into the No. 2 seam of coal which is here from 28 to 36 inches in thickness. It is worked on the single entry system, and has fan ventilation. 63 miners and 25 day hands are employed. This mine is kept in good condition.

CHAPMAN

Is located near Chapman on the O. S. Ry., and is operated by the Chapman Coal Co. John E. Hayes is superintendent, and Jacob Houser is mine boss. It is a drift opening into the No. 2 seam of coal which is here from 2 to 3 feet in thickness. It is worked on the single entry system and has furnace ventilation. 45 miners and 15 day hands are employed.

PRICE

Is located on the Price switch of the O. S. Ry., and is operated by Gosline and Barbour. J. C. Hurd, Jr., is superintendent and Arthur Mapes mine boss. It is a drift into the No. 2 seam of coal which is here from 2 to 3 feet in thickness. It is worked on the single entry system, and has furnace ventilation. Fifty miners and fourteen day hands are employed.

GARFIELD

Is located west of Coalton, on the C., H. & D. Ry., and is operated by the Garfield Coal Co. John S. Wilson is superintendent and Ellison Rhodes is the mine boss. It is a drift opening into the No. 2 seam of coal which is here from 18 to 36 inches in thickness. It is worked on the single entry system, and has furnace ventilation. Twenty-five miners and seven day hands are employed. Conditions were favorable here.

STAR NO. 4

Is located three miles west of Jackson, on the O. S. Ry., and is operated by the Star Furnace Co. Henry Price was in charge. It is a drift mine into the No. 1 seam of coal, which is here from 3 to 4 feet in thickness. This mine is worked on the double and cut-off systems, and had fan ventilation. Twenty-five miners and sixteen day hands are employed. Machines operated by compressed air are used to cut the coal. Conditions were ordinary here.

MCKITTRICK

Is located at Oak Hill, on the C., H. & D. Ry., and is operated by the McKittrick Coal Co. J. J. McKittrick was superintendent, and Evan J. Evans was mine boss. It is a drift opening into the No. 5 seam of coal, which is here about 34 inches in thickness. It is worked on the single entry system, and has furnace ventilation. Twenty miners and four day hands are employed. Conditions were favorable here.

GLOBE

Is situated near Jackson, and is operated by the Globe Iron Co. Elias Crandall is superintendent, and J. T. Jenkins is the mine boss. It is a shaft mine 111 feet deep into the No. 1 seam of coal, which is here from 2 to 4 feet in thickness. It is worked on the double entry system, and has fan ventilation; 39 miners and 12 day hands were employed. On January 27 the scales were tested and found correct. This mine is kept in fair condition.

OAK HILL

Is located at Oak Hill, and is operated by the Oak Hill Fire Brick Co. J. J. Thomas was superintendent, and Jesse Smith was mine boss. It is a drift opening into the No. 5 seam of coal which is here about 30 inches in thickness, with about 2 feet of fire clay above that is taken out, both products being used in the brick works. It is worked on the single entry system, and is ventilated by a basket in the air shaft. Eleven miners and two day hands are employed. At my last visit on April 18 the mine was suspended, the airway having fallen in and been choked. They were employed in sinking a new air shaft to remedy this.

HURDS SHAFT

Is located on the Ada switch of the O. S. R. R., and is operated by the Hurd Coal Co. George Wheldon is the superintendent, and J. J. Rowe is mine boss. It is a shaft 50 feet in depth to the No. 2 seam of coal, which is here from 2 to 3 feet in thickness. It is worked on the single entry system, and has fan ventilation. Eighteen miners and seven day hands are employed. It is an old mine, having been suspended many years, until the past year. The line entries have been exhausted. The ventilation was very ordinary, and they were instructed to clay the brattices and open up the air way. On May 17, 1900, the scales were tested and found accurate.

ECLIPSE

Is located on the Springfield switch of the O. S. Ry, and is operated by the Eclipse Coal Co. E. O. Roberts is superintendent, and E. T. Hopkins is the mine boss. It is a drift opening into the No. 2 seam of coal which is here from 2 to 3 feet in thickness. It is worked on the single entry system, and has furnace ventilation. Sixty miners and 15 day hands are employed. The southwest hill was suspended during the winter.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening	Name of Owner or Operator.	Number of Men.	P. O. Address.
Bat's Nest	Drift	Bat's Nest Coal Co.	5	Glen Roy.
Poling No. 2	"	Poling Coal Co.	2	Dayton.
Rhodes	"	Coalton Coal Co.	6	Coalton.
Boylan	Slope	Peter Boylan, Sr.	4	"
Goodrich	Drift	Henry Goodrich	2	"
Sells	"	George Sell	2	"
Cochran	"	Jack Cochran	6	"
Faulkner	"	Jacob Faulkner	6	Leach.
Houser	"	Jacob Houser	6	Chapman.
Chambers	"	Wm. Chambers	2	"
Thompsons	Slope	John Thompson	6	Jackson.
Peakes	"	Peake & Collard.	2	Coalton.
Dempsey & Bradshaw.	Drift	Dempsey & Bradshaw..	2	"
Andrew Laws	"	Andrew Law	1	Jackson.
C. W. Law	"	C. W. Law	5	"
Wm. Law	"	Wm. Law	5	"
Trago	"	Herbert Trago	2	"
Wartenbee	"	Sam'l Wartenbee	2	"
Lackey	"	A. W. Lackey	4	Rocky Hill.
J. D. Thomas	"	J. D. Thomas	2	Oak Hill.
Jones	"	Jones Coal Co.	7	"
Davis & Thomas	"	Thomas-Davis Coal Co.	3	"
Lucas	"	Burt Lucas	2	Coalton.
Ward	"	Ward Coal Co.	8	Oak Hill.
Jones & Darling	"	Jones & Darling	6	Jackson.

VINTON COUNTY.

RACCOON

Is located at Minerton, on the C., H. V. & T. Ry., and is operated by John Lawler. It is a drift opening into the No. 4 seam of coal, which is here from 44 to 56 inches in thickness. John L. Lawler is the superintendent, and George Kavanaugh is the mine boss. It is worked on the single entry system, and has furnace ventilation. Sixty-seven miners and 10 day hands are employed. In January leakages were found in the brattices and room doors. These were required to be corrected in order to furnish better ventilation.

STAR NO. 2

Is located near Hawks, on the C., H. V. & T. Ry., and is operated by E. W. Keck & Co. E. W. Keck is superintendent, and Sanford Freeman is mine boss. It is a drift opening into the No. 4 seam of coal, which is here from 52 to 54 inches in thickness. It is worked on the cut-off system, and has furnace ventilation. Sixteen miners and four day hands are employed. They were instructed to improve the furnace and airway.

During the spring a less number of men were employed. On April 23 the mine was suspended. The scales were tested and found that the weigh box was resting on the frame and apron. When swinging clear, the weight was correct.

ORETON

Is located at Oretton, on the C., H. V. & T. Ry, and is operated by the Vinton County Coal Co. Wm. Ellis is the superintendent and mine boss. It is a drift mine into the No. 4 seam of coal which is here from 50 to 54 inches in thickness. It is worked on the single entry system, and has furnace ventilation. Forty-nine miners and ten day hands were employed. A new opening has been made near by on the north, but the strata is proving faulty and it is not likely that it will be pushed very far.

HEASLEY'S.

This mine is located at Zaleski, and was suspended during the year.

INGHAM'S

Is located at Ingham, on the B. & O. S. W. Ry, and is operated by the Ingham Coal Co. John Higgins was superintendent, and Harley Turner was mine boss. It is a drift mine into the No. 5 seam of coal, which is here about 34 inches in thickness. It is conducted on the single entry system, and was ventilated by natural pressure. Eleven miners and three day hands were employed. This mine after a suspension was turned over to a new firm, who are making another opening, abandoning the previous workings.

NEWLUN

Is located northwest of McArthur, and is operated by the McArthur Coal Co. F. E. Moore is the superintendent, and B. F. Newlun was the mine boss. It is a drift opening into the No. 3 seam of coal, which is here nearly 5 feet in thickness. It is worked on the single entry system, and is ventilated by natural pressure. Fourteen miners and two day hands were employed. Artificial ventilation was ordered and they promised to comply. The work was fitfully conducted as they had no railroad connection. For the last two months they have been suspended, and did not expect to resume work until a furnace was provided. On the 17th of November, 1899, Thomas K. Stevens was killed by a fall of rock. He had been working with his nephew in the first room on the north side of the main entry skirting the crop. This room seemed to be fairly well timbered. They had not been in this room since the 14th, and on the morning of the 17th the deceased started to go to the face, when he seemed to hear the rock working, and turned to make his way out when thirty or forty feet of the rock, which was about five feet in thickness, fell, and one of the smaller pieces struck him, causing instant death. Upon examination it was found that there was a clear seam running along the east

rib and another seam running along the middle of the roadway, and the face of the room a crossing seam connecting the two, thus account for the fall.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Operator. Name of Owner or	Number of Men.	P. O. Address
Mill	Drift	Gilman & Ward.....	1	McArthur.
Winters	"	Enos T. Winters.....	3	"
Smith Bros	"	Wm. Smith	2	"
Wykoff	"	George Wykoff	1	"
Dewalt	"	J. S. Dewalt.....	2	Minerton.

MINES EMPLOYING LESS THAN TEN MEN.

SCIOTO COUNTY.

Name of Mine..	Kind of Opening	Operator. Name of Owner or	Number of Men.	P. O. Address
Marsh	Drift	Morgan & Horton.....	7	Eifort.
		CLAY MINES.		
Mill No. 1.....	Drift	Webster Fire Brick Co.	6	Webster.
Mill No. 3.....	"	"	12	"

REPORT OF R. M. MASON,

Inspector of the First District from May 21st, 1900, to
November 15th, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio.

SIR: I herewith submit to you the report of the mines in the First District from the date of my appointment, May 21st, 1900, until the close of the fiscal year, November 15th, 1900.

The time embraced by this report was of so short a duration that I was unable to familiarize myself with all of the mines and their attending locations and conditions. The statistical tables show the following: Six new fans erected, two second openings, five sets of scales tested, three new mines opened and one abandoned. Three fatal accidents occurred within the period covered by this report, the cause of which will be found in the tabulated report of mines. General order number one, issued from the Mining Department on the ninth day of July, 1900, has been generally observed throughout this district, and the improved sanitary conditions of the mines has been very advantageously realized by both employers and employees, and it is hoped that it will conduce to a higher standard of modern management in which the air currents shall be directed to the working faces supplying the workmen with pure air, as the mining laws provide.

The activity of the mining industry during the past year has been keenly felt, and has so stimulated the commercial interests as to give bright hopes for the future in which those interested in mining have reasons for congratulations.

On June 8th I was called to the Phoenix No. 2 mine, Athens county, to assist in rescuing the unfortunate bodies of three miners who lost their lives in an explosion which took place at that mine, a detailed account of which will be found in the report of the Inspector from that district.

It is with a feeling of gratitude that I express my obligations for your wise counsel, able advice and assistance which has proven of inestimable value to me in the discharge of my duties. I also wish to express my appreciation to the miners and operators for their many courtesies and expressions of good will, as well as their assistance in furthering the intent and purpose as promulgated by the mining laws of the state.

Very respectfully yours,

R. M. MASON,

Inspector of Third District.

Logan, Ohio, November 15, 1900.

HOCKING COUNTY.

NEW PITTSBURG NO. 1

Is located at Blatchford on the Brush Fork Branch of the Hocking Valley Railroad, and is operated by the New Pittsburg Coal Co., Columbus, Ohio. Vint Fergeson, Buchtel, Ohio, is superintendent, and Geo. W. Butt, Blatchford, Ohio, is mine boss. This is a drift opening penetrating the No. 6 seam of coal, which is from 6 to 8 feet in thickness. It is worked on the double entry system, and is ventilated by a fan. Ninety-seven miners and 37 day hands are employed. Five visits were made within the period covered by this report. On September 28th, I found the north side had resumed operations after having been suspended for an indefinite period, and was being ventilated by an escape of foul air from the No. 2 mine. I ordered all work suspended on the north side of the mine until a fan had been erected for the purpose of supplying the workmen with fresh air. The difficulty encountered in this mine is due to the carelessness of the former management in bratticing break-throughs and the inferior material (slate and slack) used. The present management has always shown a disposition to comply with orders, and the mine has been placed in an improved condition within the year. Electric cutting and drilling machines and rope haulage are in use.

NEW PITTSBURG NO. 2

Is located at Blatchford at the terminus of the Brush Fork Branch of the Hocking Valley Railroad, and is operated by the New Pittsburg Coal Co., Columbus, Ohio. Vint Fergeson, Butchtel, Ohio, is superintendent, and E. Bridgewater, Blatchford, Ohio, is mine boss. This mine is a drift penetrating the No. 6 seam of coal which is from six to eight feet in thickness. It is operated on the double entry system, and is ventilated by a fan. One hundred and twenty-two miners and 33 day hands are employed. Two visits were made during the year. The pillars and entry stumps are being drawn, and the mine will soon be abandoned. The management shows a desire to operate their mine in accordance with the mining laws. Electric machines and rope haulage are in use. I tested the scales and found them accurate.

NEW PITTSBURG NO. 3

Is located at Consol on the Brush Fork Branch of the Hocking Valley Railway, and is operated by the New Pittsburg Coal Co. Vint Fergeson is superintendent and William Slater is mine boss. This is a drift opening penetrating the No. 6 seam of coal which is from 5 to 7 feet in thickness, and a fan is used as a means of ventilation. It is operated

on the double entry plan, and employs 158 miners and 55 day men. Four visits were made within the period covered by this report. On my first visit the mine was found in a very poor condition owing to repairs and changing of the air course. On June 23rd I again visited this mine and found it in a very poor condition owing to the fan being unable to draw the air around the working places, and no brattices being erected between the entries. I ordered new brattices erected, also a new fan installed. On June 28 I again visited the mine and found the fan in operation, and the mine in a improved condition, and the same was permitted to resume operations. The management manifest a disposition to regard the minig laws, which is evident from the marked improvements made within the year. Electrical machines and rope haulage are in use.

NEW PITTSBURG NO 4

Is located on the Brush Fork Branch of the Hocking Valley Railroad, in the village of Buchtel, and is owned and operated by the same company as the No. 1, 2 and 3 mines. Vint Furgeson is superintendent and James Johnson of the same place is mine boss. This mine is a drift penetrating the No. 6 seam of coal which at this point is from four to five and one-half feet in thickness. It is conducted on the double entry plan and is ventilated by a fan. One hundred and twenty miners and twenty-three day men are employed here. Two visits were made during the year. On my first visit the mine was found in fair condition with the exception of the second entry, which was found to be very sluggish, owing to no break-throughs being driven in the rooms. Break-throughs were ordered and three rooms stopped until these repairs were made. On my second visit I found the mine in fair condition, with the exception of the third and fourth east entries where the air was found sluggish due to the break-throughs between the entries leaking, and no trapper at the door. I ordered the break-throughs repaired, and a trapper kept at the door. The management shows a disposition to comply with the mining laws, and have placed the mine in an improved condition. Electric machines and rope haulages are in use.

NEW PITTSBURG NO. 6

Is located near Monday on the Monday Branch of the Hocking Valley Railroad, and is operated by the New Pittsburg Coal Co. Hugh Dallymple, Monday, Ohio, is superintendent, and James Johnson of the same place is mine boss. This mine consists of two drifts which enter the No. 6 vein of coal which varies in thickness from six to eight feet. It is worked on the double entry system, and is ventilated by a fan. Two hundred and fifty miners and thirty-two day men were employed. On June 25th I visited this mine and found the air sluggish

on the west side owing to many of the break-throughs between the entries being open, and the management unable to procure the necessary material, due to the stress of business. These defects were ordered corrected with as much dispatch as possible. The east side of the mine was in fair condition. The management has made many valuable improvements in conformity to the mining laws within the year. Electric machines and rope haulage are in use.

NEW PITTSBURG NO. 7

Is situated north of Murray on the Brush Fork Branch of the Hocking Valley Railroad and is operated by the New Pittsburg Coal Co. Vint Furgeson, Buchtel, Ohio, is superintendent, and C. Call, Murray, Ohio, is mine boss. The opening is a drift penetrating the No. 6 seam of coal, the thickness of which has not been ascertained, many rocky faults having retarded its development. It is conducted on the double entry system, and is ventilated by means of a furnace. Twenty miners and seven day hands are employed. On September 25th I visited this mine and found it in good condition. It is a new mine equipped with modern appliances, and will be the best equipped and one of the most extensive mines in the valley when completed. Electric machines and motor haulage are now in operation.

BUCKEYE NO. 1

Is located at Sand Run, on the Monday Creek Branch of the Hocking Valley R. R., and is operated by the Buckeye Coal and Railway Co., Columbus, Ohio. G. E. Tetrick, Jobs, Ohio, is superintendent and Adam J. Laverty, Sand Run, Ohio, is mine boss. It is a drift opening penetrating the No. 6 seam of coal which varies in thickness from three to seven feet. It is conducted on the double entry system, and is ventilated by means of a fan. Ninety miners and twenty-six day hands are employed. Two visits were made within the period covered by this report. The south side of the mine has been abandoned, on account of low coal, and a new mine has been opened in the north hill to a fine vein of coal. New hoppers have been built, and the mine resumed operations on October 16. This mine was found in good condition.

BUCKEYE NO. 2

Is located at Jobs, Ohio, on the Brush Fork Branch of the Hocking Valley R. R., and is operated by the same company as the No. 1 mine. G. E. Tetrick, Jobs, Ohio, is superintendent, and Edward Fluke, Nelsonville, Ohio, is mine boss. It is a drift opening penetrating the No. 6 seam of coal which varies in thickness from five to seven feet. It is worked on the double entry plan, and is ventilated by a fan. Two hun-

dred and fifty-one miners and sixty-one day hands are employed here. The mine was found in good condition. Many valuable improvements have been made within the year. It is an extensive mine and is operated in conformity to the mining laws. Electric machines and rope haulage are in use.

BUCKEYE NO. 3

Is situated at Jobs, Ohio, on the same railroad as the Nos. 1 and 2 mines, and is owned and managed by the same company. It is under the supervision of the same superintendent and mine boss as the No. 2 mine. This is a drift opening into the No. 6 vein of coal which varies in thickness from six to eight feet. It is conducted on the double entry system, and is ventilated by means of a fan. Two hundred and forty-eight miners and seventy-eight day hands are employed. This mine was visited twice during the year, and found in good condition. This is also quite an extensive mine. The main north and east entries have been driven to rock faults, and abandoned. The requirements of the mining laws have been fulfilled. Compressed air machines, motor, and rope haulage are used for cutting and hauling the coal.

BUCKEYE NO. 4

Is located on the Monday Branch of the Hocking Valley R. R. and is operated by the Buckeye Coal and Railway Co., Columbus, Ohio. J. M. Roan, Straitsville, Ohio, is superintendent, and Lou McDaniel, of the same place, is mine boss. The opening is a drift into the No. 6 seam of coal, which is from six to eight feet in thickness. It is worked on the double entry system, and is ventilated by a fan. One hundred and ninety-one miners and fifty-four day hands are employed. Three visits were made during the year. This is an extensive mine, and the irregularity of break throughs caused the air on the north side to be sluggish at times. The south side is in fair condition. Electric machines and rope haulage are in use.

SNAKE HOLLOW

Is situated on the Monday Branch of the Hocking Valley R. R., about one mile from Nelsonville, and is operated by C. L. Posten & Co., Nelsonville, Ohio. J. C. Mellinger, Nelsonville, Ohio, has entire supervision. It is a drift opening penetrating the No. 6 seam of coal, which is from six to eight feet in thickness. It is operated on the double entry system and is ventilated by a fan. Two hundred and thirteen miners and forty-four day hands are employed. Two visits were made within the period covered by this report. The north side of this mine becomes sluggish at times owing to surface leaks on the ninth and tenth east entries, due to the pillars being drawn preventing the air from travelling at the working places. All abandoned entries were bratticed in order to force the air

to the working men. The south-side of the mine having a speedy evacuation rendered the fan inadequate to supply the amount of air as required by the mining laws. The management erected a new twelve foot fan. This is an extensive mine and has made many valuable improvements in conformity to the mining laws within the year. Electric machines and rope haulage are used.

COALGATE

Is located at the terminus of the Snow Fork Branch of the Hocking Valley R. R., and is operated by the Somers Coal Co., Columbus, Ohio. Zeth Williams, Coalgate, Ohio, is superintendent, and C. A. James, of the same place, is mine boss. This is a drift penetrating the No. 6 vein of coal which varies in thickness from five to nine feet. It is conducted on the double entry system, and is ventilated by means of a fan. One hundred miners and thirty-three day hands are employed. This mine has been in a poor condition throughout the year due to the poor methods of former management, and a very faulty section of coal that is now being operated making it a very difficult mine to force the air through old workings to the workmen. The management exhibits a desire to place the mine in accordance with the mining laws should conditions develop to admit of the same. Electric machines and motor haulage are employed.

COLUMBUS

Is a new mine located near Murray on the Snow Fork Branch of the H. V. R. R., and is operated by the Columbus Coal Co., Columbus, Ohio. C. H. Boardman, Columbus, Ohio, is superintendent, and Wm. Thomas Murray, Ohio, is mine boss. It is a drift penetrating the No. 6 seam of coal and is ventilated by a furnace. Sixteen miners and seven day hands are employed. This mine is equipped with a Jeffrey Electric plant. It is in good condition and will soon be in full operation, yet many rocky faults are being encountered. Electric machines and motor haulage are now in operation.

NO. 29

Is located at Murray, Ohio, on the Snow Fork Branch of the Hocking Valley R. R., and is operated by the Greendale Coal and Mining Co. Murray, Ohio. J. W. Miskell, Murray, Ohio, has entire supervision. The opening is a drift penetrating the No. 6 seam of coal to a depth of from six to eight feet. It is operated on the double entry plan and is ventilated by a furnace. This mine is suspended indefinitely.

BLACK DIAMOND

Is located near Haydenville, and is operated by the Haydenville Mining and Manufacturing Co., Haydenville, Ohio. J. W. Jones, Logan, Ohio, is superintendent, and Ed. Lehman, of the same place, is mine boss. This is a drift opening penetrating the No. 6 seam of coal which varies from

three to six feet in thickness. When in operation this mine is operated on the single entry system, and is ventilated by natural pressure, but it has been suspended indefinitely.

BIG FOUR

Is located at Sand Run on the Monday Branch of the Hocking Valley R. R., and is operated by the Jacoby Coal Co., Sand Run, Ohio. Geo. Jacoby, Sand Run, Ohio, is superintendent, and Aaron Greene, of the same place, is mine boss. It is a drift opening to the No. 6 seam of coal which is from six to eight feet in thickness. It is worked on the double entry system, and is ventilated by means of a fan. This mine was found sluggish, the inlet of the mine being at the old Longstreth mine, the air being forced to travel over old workings, and the fan inadequate to draw the air around all the workings. The management contemplates moving the fan to the main dark entry which will be in direct connection with the air, which I anticipate will improve conditions materially. Compressed air machines are used.

BEATTIE BROS.

Is located near Buchtel on the Snow Fork Branch of the Hocking Valley Railroad, and is operated by Beattie Bros. Coal Co., Nelsonville, Ohio. Alex Beattie, Nelsonville, Ohio, has the entire supervision of the mine. This is a drift opening into the No. 6 seam of coal which is about six feet in thickness. Seventeen miners and three day hands are employed. The air was found very sluggish. Much irregularity is exhibited in keeping fire in the basket at the outlet. A south entry is being driven to the old Buchtel mine which will be used as an inlet. The management is endeavoring to reach an opening on the northwest side of the mine for an outlet in which a furnace will be erected, and when completed will improve conditions. The coal is mined with picks. The scales were tested and found accurate.

JACKSON COUNTY.

SUPERIOR NO. 1

Is located west of Wellston, Ohio, on the Ohio Southern & Cincinnati, Hamilton and Dayton Railway, and is owned and operated by the Superior Coal Co., Wellston, Ohio. H. C. Murfin, Jackson, Ohio, is superintendent and W. J. Davis, Wellston, Ohio, is mine boss. This is a shaft 100 feet in depth penetrating the No. 2 seam of coal which is from thirty-three to forty-two inches in thickness. It is conducted on the double entry system, and is ventilated by a fan. One hundred and nineteen miners and forty-four day men are employed. Two visits were made during the year, and the mine found in good condition. There was a good volume of air circulating at the working faces. I tested two sets of scales and found them correct.

SUPERIOR NO. 2

Is situated on the Ohio Southern and C., H. & D. R. Rs., and is connected with the Superior No. 1 mine on the east. It is operated by the Superior Coal Co., and is under the same supervision as the number one. It is a shaft opening eighty-five feet deep penetrating the No. 2 vein of coal which is from thirty-five to forty-five inches in thickness. It is conducted on the double entry system, and has fan ventilation. Ninety-two miners and fifty day hands are employed. Two visits were made within the period covered by this report, and the mine was found to be in a very poor condition owing to a squeeze on the south entries closing up the air course. A new air course is being driven from the fan to the first west entries. The management is exerting every effort to place the mine in proper condition. Upon the completion of these valuable repairs good results are anticipated. The coal is mined with picks.

SUPERIOR NO. 3

Is located northwest of Wellston, on a switch of the B. & O. S. W. Ry., and is owned and operated by the same company as the number one and number two mines. O. B. Gould, Wellston, Ohio, is superintendent, and J. M. James, of the same place is mine boss. This is a shaft opening forty-seven feet deep which penetrates the No. 2 seam of coal which at this point varies from thirty-four to fifty-five inches in thickness. It is worked on the double entry system, and is ventilated by a fan. Two hundred and five miners and forty-four day men are employed. Three visits were made during the year. On my first visit the mine was found in poor condition owing to many of the break-throughs in the old mine extending to the surface allowing the air to escape, and no brattices built in the face of the entries and from two to four brattices open. These repairs were ordered made at once, and the main west entries were stopped until the air could be carried to the face of the working places. On my second visit I found many falls in the airway leading to the west part of the mine, and also discovered a leak in Corwin No. 2 mine allowing a waste of ten thousand feet of air, and the mine was closed until there was a sufficient amount of air on each entry. On my third visit I found the air circulating around the mine and many valuable repairs being made in order that the mine might be permitted to resume operations. Many other repairs were ordered made including doors placed on all butt entries and the break-throughs in rooms bratticed. The management is endeavoring to comply with the mining laws which is evident by the improved condition of the mine. The coal is mined by picks.

SUPERIOR NO. 4

Is located near Ironton Junction, on the C., H. & D. R. R., and is operated by the Superior Coal Co. O. B. Gould is superintendent, and

C. M. Hutchinson, Glenroy, Ohio, is bank boss. This is a shaft seventy-seven feet in depth which penetrates the No. 2 seam of coal which is from thirty to forty inches in thickness. It is conducted on the double entry plan and has fan ventilation. One hundred and fifteen miners and thirty-six day hands find employment here. This mine was found in fair condition with the exception of the seventh and eighth west entries which were deficient owing to the air traveling up the third west over the old workings. I suggested that a split be made in the air at the third west entry in order to reduce the friction, and allowing only sufficient air to supply new workings on the third west entries. I also requested that an overcast be placed at the bottom of the slope to prevent the air from escaping up the slope. These instructions were agreeably accepted by the management and when completed will place the mine in good condition. The management of this mine accept the mining laws of the state as the basis of their operations. The coal is mined with picks.

SUPERIOR NO. 5

Is situated at Coalton on the C., H. & D. R. R. and is operated by the Superior Coal Co. George Wheldon, Jackson, Ohio, is superintendent, and E. T. Davis, Coalton, Ohio, is mine boss. This opening is a drift which penetrates the No. 2 seam of coal which varies from a few inches to three and one-half feet in thickness. It is operated on the single entry system, and is ventilated by means of a fan. Fifty-three miners and thirty-nine day men find employment here. This mine was found in fair condition with the exception of check doors on the butt entries which were ordered erected. The coal is mined by the use of picks.

SUPERIOR NO. 6

Is located east of Wellston, on the C., H. & D. and the O. S. R. Rs., and is owned and operated by the Superior Coal Co. O. B. Gould is superintendent and W. M. Cooker, Wellston, Ohio, is mine boss. It is a slope penetrating the No. 2 seam of coal which varies in thickness from thirty-four to forty-five inches. It is conducted on the double entry system, and has fan ventilation. Sixty-five miners and thirty-one day hands are employed. This mine was found in good condition. The coal is mined with picks.

SUPERIOR NO. 7

Is located near Glenroy on the O. S. and C., H. & D. R. Rs., and is operated by the Superior Coal Co. N. M. White, Jackson, Ohio, is superintendent, and J. C. Smith, of the same place is mine boss. It is a shaft 110 feet in depth which penetrates the No. 2 vein of coal which varies in thickness from three to three and one-half feet. It is operated on the double entry plan and has fan ventilation. One hundred and

thirty-five miners and forty-five day hands are employed here. Two visits were made during the period covered by this report. The scales were tested and found accurate. The mine was in good condition. The coal is mined by picks.

FLUHART NO. 1

Is situated in South Wellston, Ohio, on the B. & O. S. W. and the Hocking Valley Railroads, and is owned and operated by the Fluhart Coal Co., Wellston, Ohio. Theodore Fluhart, Wellston, Ohio, is superintendent, and David Powell, of the same place, acts as mine boss. It is a shaft eighty feet in depth to the No. 2 seam of coal which varies from thirty-three to forty-eight inches in thickness at this point. One hundred and fifty-two miners and fifty-four day hands are employed. Two visits were made to this mine and the mine found in good condition. Picks are used at this mine for mining coal. This mine is conducted on the double entry system and is ventilated by means of a fan.

FLUHART NO. 2

Is situated southwest of Wellston on the same railroad and is owned and operated by the same company as the number one mine. Theodore Fluhart is superintendent, and Victor Sullivan of the same place is mine boss. It is a shaft 167 feet in depth penetrating the No. 2 vein of coal which at this point varies in thickness from thirty-one to forty inches. It is operated on the double entry plan, and is ventilated by means of a fan. Ninety miners and forty-six day hands are employed here. Three visits were made within the period covered by this report. On my first visit the mine was in a very bad condition. There had been a squeeze in the mine closing up the air course, and the main entry. The main entry had been driven through the squeeze and the air forced over and through the old workings a distance of four thousand feet before reaching the working faces, rendering the air foul and weak. The south entry was being driven three hundred feet to the air shaft which will change the air course. On my second visit I found the mine in the same condition as on my former visit. The south entry was being driven night and day, and when completed will place the mine in good condition. On October 2nd John E. Bolen was injured in his stepfather's room from a premature explosion, causing his death at ten o'clock on the same day. The coroner rendered a verdict that the deceased came to his death by a premature explosion for which he, himself, was responsible and that the said company could not be held responsible for the same. Picks are used for mining the coal.

FLUHART NO. 3

Is located east of Wellston on a switch of the B. & O. S. W. R. R., and is operated by the same company as the No. 1 and No. 2 mines.

Theodore Fluhart is the superintendent, and James Brakey of the same place is mine boss. This is a shaft opening eighty feet deep into the No. 2 seam of coal, which varies from two to four feet in thickness. It is operated on the double entry plan and is ventilated by means of a fan. Fifty miners and twenty-five day hands are employed. This mine is in poor condition owing to the air course at the first west entry being caved in and the break-throughs in the first and second entries being driven irregular. I ordered the air course changed at the first west entry for the purpose of shortening the same, and to prevent the air from being forced through the old workings. Gas was found in three rooms. All break-throughs were ordered bratticed to permit the air to travel at the face of the rooms. Many improvements in compliance with the mining laws have been made within the year. Picks are used for mining the coal.

MILTON NO. 1

Is situated on the B. & O. S. W. R. R. and is owned and operated by the Milton Coal Co., Wellston, Ohio. D. E. Ritchie, Wellston, is superintendent, and George Davis, of the same place is mine boss. It is a shaft of seventy-six feet in depth which penetrates the No. 2 vein of coal which is about four feet thick at this point. It is conducted on the double entry system, and has fan ventilation. Twenty-two miners and twelve day men find employment here. The mine was found in a very sluggish condition, owing to the air course being closed. I ordered the fan speeded to increase the volume of air. The pillars are being drawn and the mine will soon be abandoned. Picks are used for mining the coal.

MILTON NO. 2

Is located at the same place on the same railroad and is owned and operated by the same company as the No. 1 mine. D. E. Ritchie is superintendent, and W. B. Montgomery of the same place is mine boss. It is a shaft opening seventy-six feet deep which penetrates the No. 2 seam of coal, which varies from three to four feet in thickness. One hundred and thirty miners and sixty-five day hands find employment at this mine. It is operated on the double entry system, and has fan ventilation. The mine was found in good condition excepting the fourth west entry which was sluggish, due to two of the rooms in the center of the entry caving in and preventing the air from traveling at the head of the rooms. I requested check doors erected beyond abandoned rooms to convey the air from the entries to the face of the rooms. Electrical machines and motor haulage are used in mining the coal.

MILTON NO. 3

Is situated at Wellston, on the C., H. & D. R. R., and is owned and operated by the same company as the number one and two mines. D.

E. Ritchie is superintendent and Henry Shiers of the same place is mine boss. This is a shaft opening into the No. 2 seam of coal which is from three to four feet thick at this point. It is operated on the double entry system, and is ventilated by a fan. Sixty-four miners and thirty-six day hands are employed. This is a machine mine and holds the record for loading more coal in one day than any other mine in Jackson county. It was found in good condition. Electrical machines and rope haulage are used.

WELLSTON NO. 3

Is located on a switch of the C., H. & D. Railway, and is operated by the Wellston Coal Co., Wellston, Ohio. T. J. Morgan is superintendent, and Daniel Harry, of the same place is mine boss. It is a shaft opening eighty-seven feet deep to the No. 2 seam of coal, which at this place varies in thickness from three and one-half to four feet. It is operated on the double entry plan, and is ventilated by a fan. Sixty-five miners and twenty-nine day hands are employed. Two visits were made to this mine during the year, and found in a very poor condition, there being no air course, and the air being compelled to travel over the old workings causing so great a resistance that no air was found at the working places. All miners who were not supplied with air within sixty feet of the working faces were ordered to discontinue work and the management was requested to place the mine in a proper condition. On my second visit the mine was found in an improved condition, the orders issued at my former visit having been complied with and the mine was permitted to resume operations. This mine has been placed in an improved condition within the year. Picks are used for mining the coal.

EMMA NO. 1

Is located at Altoona on the O. S. and the C., H. & D. Railroads, and is operated by the Emma Coal Co., Glen Roy, Ohio. Ed Jones, Jackson, Ohio, is superintendent, and Jesse Kennison, Glen Roy, Ohio, acts as mine boss. This is a shaft opening into the No. 2 seam of coal which varies from 30 to 40 inches in thickness. It is conducted on the double entry system, and has fan ventilation. Fourteen miners and six day men are employed here. Two visits were made during the period covered by this report. I found the air course caved in, and filled with water, rendering it impossible to measure the air at the inlet. No air was found at the working faces. I suggested that the air course be changed and the air forced up in the main entry. This is an old mine, and will soon be abandoned. Picks are used for mining the coal.

EMMA NO. 2

Is situated one-half mile north of Altoona, on the Ohio Southern Railway, and is operated by the Emma Coal Co. Edwin Jones, Jackson, Ohio,

is superintendent, and Charles W. Rodgers, of the same place is mine boss. It is a shaft one hundred feet in depth to the No. 2 seam of coal which is about 3 feet thick at this point. It is worked on the double entry system, and is ventilated by a fan. One hundred miners and 35 day hands are employed. Two visits were made within the period covered by this report. On my first visit I found this mine in poor condition owing to the brattices and doors allowing the air to escape, and the air course being filled with fallen slate, which was ordered cleaned out, and new brattices and doors built. I also ordered check doors placed on all butt entries, and the rooms bratticed. On my second visit I found the mine in fair condition with the exception of the seventh and eighth east entries, which were found sluggish owing to the irregularity of the rooms preventing the air from traveling at the face of the rooms. All long rooms were ordered stopped until all rooms are made uniform, and breakthroughs made opposite each other. This mine has been placed in an improved condition, and in compliance with the mining laws during the year. Picks are used for mining the coal.

EMMA NO. 3.

Is located on the Springfield switch of the Ohio Southern Railroad, and is operated by the same company as the No. 1 and No. 2 mines. Edwin Jones, Jackson, Ohio, is superintendent, and John D. Richards, of the same place is mine boss. It is a drift penetrating the No. 2 seam of coal, which at this point varies in thickness from 2 to 3 feet. It is conducted on the single entry system, and is ventilated by a furnace. Sixty-five miners and 22 day hands are employed. This mine was visited twice during the year, and it was found in poor condition. The west entry which was the inlet for the air having fallen in and closing the same rendering the furnace of no value. The roof on the main entry was very dangerous. A new opening was being made for the air inlet. I ordered the mine closed until the the entry roof had been timbered and the air course completed. On my second visit the mine was found in fair condition. The repairs ordered on my first visit had been made, and the mine was permitted to resume operations. Many valuable improvements were made within the year. Picks are used in mining the coal.

TOM CORWIN NO. 1

Is situated south of Glenroy on the Ohio Southern and the C., H. & D. Railways, and is operated by the Tom Corwin Coal Co., Dayton, Ohio. Walter Allen, Glenroy, Ohio, is superintendent, and Chas. Trace, of the same place is mine boss. It is a shaft 90 feet in depth to the No. 2 seam of coal which is from 30 to 40 inches in thickness. It is operated on the double entry system, and is ventilated by means of a fan. One hundred and forty-five miners and 70 day men are employed. Two visits were made during the year, and the mine found in fair condition with the

exception of check doors on butt entries, and many of the breakthroughs open on entries. These defects were ordered remedied at once. On June 18th, Elias Ferris was killed by a horse-back falling on him, killing him instantly. This accident occurred in the south side of the mine, and the size of the slate was four feet wide, eight feet long, and one foot thick. Electrical machines and rope haulage are used.

TOM CORWIN NO. 2

Is located northwest of Wellston on the Baltimore & Ohio South Western Railroad, and is operated by the same company as the No. 1 mine. Jos. Ginicks, Glenroy, Ohio, has entire supervision. This is a shaft 35 feet deep to the No. 2 seam of coal, which is from 2 to 3 feet in thickness. It is operated on the double entry system, and is ventilated by a fan. Thirty-five miners and twenty-four day hands are employed. This mine was in a very poor condition owing to the air course being filled with slate from the many falls, and all the doors and brattices being decayed, allowing the air to escape. I ordered new doors and brattices erected. These repairs were made and the mine placed in an improved condition. Electrical machines are used for mining the coal.

ACORN SLOPE

Is located southwest of Glenroy, on the O. S. and C., H. & D. Railroads, and is operated by the Jones Coal Co., Jackson, Ohio. John E. Jones, Jackson, Ohio, is superintendent, and John C. Bartels, of the same place is mine boss. The opening is a slope penetrating the No. 2 seam of coal, which varies in thickness at this point from 30 to 40 inches. It is conducted on the single entry system, and is ventilated by a fan. Sixty miners and 25 day men are employed. This mine was in poor condition, the air courses being filled with slate. I ordered this mine placed in a condition to comply with the mining laws with as much dispatch as possible. Many improvements have been made. Picks are used for mining the coal.

JONES SLOPE

Is situated on the Ada switch of the Ohio Southern Railway, and is operated by the Jones Coal Co., Jackson, Ohio. John F. Jones, Jackson, Ohio, is superintendent, and Enos Miller, Coalton, Ohio, is mine boss. It is a slope opening penetrating the No. 2 seam of coal to a depth of from 2 to 3½ feet. It is worked on the single entry system, and is ventilated by a fan. Thirty-two miners and 21 day men are employed. This mine was in a good condition. Picks are used for mining the coal.

ENTERPRISE

Is located northwest of Wellston, on a switch of the B. & O. S. W. Railroad, and is operated by the Enterprise Coal Co., Jackson, Ohio. J. E.

Jones, Jackson, Ohio, is superintendent, and C. M. Holmes, of the same place is mine boss. This is a shaft to the No. 2 seam of coal, worked on the double entry system, and is ventilated by means of a fan. Eighteen miners and eleven day men are employed. This mine was found in good sanitary condition. The shaft was sunk at a low point, and one finds a steep raise in all directions, causing the coal to be very low, and very irregular. The north entries show signs of improvements. This is a new and well equipped plant. Electrical machines are used and motor haulage.

WAINWRIGHT.

Is situated east of Wellston on a switch of the C. H. & D. Railroad, and is operated by the Wainwright Coal Co., Cleveland, Ohio. Geo. Harrison, Wellston, Ohio, is superintendent, and Wm. Harrison, Ratchford, Ohio, is mine boss. It is a shaft 95 feet in depth to the No. 2 seam of coal, which is from 2 to 5 feet thick. It is operated on the double entry system, and has fan ventilation. Sixty-five miners and thirty-five day hands are employed. This mine was found in fair condition with the exception of check doors on some of the butt entries to conduct the air into the face of the rooms. I suggested that brattice cloth be used to conduct the air to the face of the north entry to remove the gas accumulated there. The mining laws are regarded, and many valuable improvements both in the interior and exterior have been made by the management. Picks are used for mining the coal at this mine.

CHAPMAN

Is located on the Ohio Southern Railroad, and is operated by the Chapman Coal Co., Jackson, Ohio. John E. Hayes, Chapman, Ohio, is superintendent, and J. F. Houser, of the same place is mine boss. This is a drift to the No. 2 seam of coal which is from 38 to 50 inches in height. It is worked on the single entry system, and has furnace ventilation. Forty miners and eighteen day men find employment here. This mine was suspended during the summer. Upon resuming operations it was found in fair condition, with the exception of the second west entry which was sluggish. I requested that a stack be built at the furnace in order to increase the volume of air. This mine was placed in an improved condition. Picks are used for mining the coal.

SPRINGFIELD

Is situated on the Springfield switch of the O. S. Railroad, and is owned and operated by the Chapman Coal Co., Jackson, Ohio. John E. Hayes, Chapman, Ohio, is superintendent, and W. J. Eisnagle of the same place is mine boss. This is a shaft opening into the No. 2 vein of coal, which is from 31 to 40 inches in thickness. It is worked on the single entry system and has fan ventilation. Fifty-five miners and twenty-three day

hands are employed. This mine was found in good condition. Electrical machines are used for mining the coal.

GRACE

Is located on the Ada switch of the Ohio Southern Railroad, and is operated by the Chapman Coal Co., Jackson, Ohio. John E. Hayes, Chapman, Ohio, is superintendent, and Edmond Gregory of the same place is mine boss. This is a shaft opening 90 feet deep which penetrates the No. 2 seam of coal, at a depth of from 30 to 36 inches. It is operated on the single entry plan, and is ventilated by means of a fan. Sixty-five miners and twenty-four day men are employed. The air in this mine was in a very contaminated condition, the air course having caved in. The abandoned room necks were also found leaking, and were ordered repaired. This mine while not in a bad condition, was not as good as anticipated. Picks are used in mining the coal.

BUCKEYE

Is located west of Coalton, on the C., H. & D. Railroad, and is operated by the Buckeye Coal Co., Coalton, Ohio. Elmer Sells, Coalton, Ohio, is superintendent, and Harvey Kiser, of the same place is mine boss. This is a drift to the No. 2 seam of coal which is from 25 to 43 inches in thickness. It is operated on the single entry system, and is ventilated by a furnace. Thirty-five miners and 12 day hands are employed. This mine was found in poor condition, the management exhibiting carelessness in closing up brattices, to which their attentions has been called. The inlet of the mine being located at the main haulage, the traveling way had so cut the rope as to render it dangerous. The management very agreeably consented to temporarily timber the same, and make a new opening which is now in the course of construction. Picks are used for mining the coal at this mine.

JONES AND MORGAN NO. 3

Is situated west of Glenroy, and west of the Northern mine on the C., H. & D. Railroad, and is operated by Jones and Morgan, Jackson, Ohio. Dave E. Jones, Jackson, Ohio, is superintendent, and David R. Jones, is mine boss. This is a slope penetrating the No. 2 seam of coal which varies in thickness from 32 to 48 inches. It is conducted on the single entry system, and has fan ventilation. Thirty-five miners and 15 day men are employed. This mine is in fair condition, with the exception of the fourth west entry which was found deficient in air owing to the brattices not being built, which was ordered done at once. Picks are used in mining the coal at this mine.

ALMA

Is located near Glenroy, on the C., H. & D. and O. S. Railroads, and is operated by the Alma Coal Company, Glenroy, Ohio. E. K. Davis, Glenroy, Ohio, is superintendent, and G. N. House, of the same place is mine boss. It is a shaft 72 feet in depth which penetrates the No. 2 seam of coal, which at this point varies in thickness from 32 to 42 inches. It is operated on the double entry plan, and is ventilated by a fan. Forty miners and sixteen day men are employed here. Two visits were made within the period covered by this report. This mine has been greatly improved within the year, and is in fine condition. Picks are used for mining the coal at this mine.

COALTON NO. 3

Is situated at Coalton, Ohio, and is operated by the Coalton Coal Co., Coalton, Ohio. Norris Cameron, Coalton, is superintendent, and Ed. Cameron, of the same place is mine boss. It is a slope opening into the No. 2 seam of coal, which is from 30 to 36 inches in thickness at this place. It is worked on the single entry plan, and is ventilated by means of a furnace. Sixteen miners and three day men are employed. This mine was found in a very sluggish condition owing to the irregularities in firing the furnace. I requested the furnace to be properly fired during working hours. The pillars are being drawn, and the mine will soon be abandoned. Picks are used for mining the coal at this mine.

STANDARD

Is located in Glenroy on the Ohio Southern and Cincinnati, Hamilton and Dayton Railroads, and is owned and operated by the Standard Coal Co., Jackson, Ohio. Dan C. Jones, Coalton, Ohio, has entire supervision. It is a shaft opening, 85 feet in depth which penetrates the No. 2 seam of coal, which at this place is from 2 to 3½ feet in thickness. It is operated on the single entry system, and has fan ventilation. Fifteen miners and thirteen day men are employed. Two visits were made during the year, and the mine was found in poor condition owing to the air course having caved in, causing the air to escape up the shaft before arriving at the working faces. I ordered this mine closed until air course was cleaned out. On my second visit the mine was found in an improved condition, and it was permitted to resume operations. This is an old mine and will soon be abandoned. Picks are used in mining the coal.

HIPPEL

Is located at Coalton, Ohio, on the Ohio Southern R. R. and is operated by the Hippel Coal Co., Coalton, Ohio. W. D. Hippel is superintendent, and James Gascoyne is mine boss. It is a slope opening into the No. 2 vein of coal which varies in thickness from two to three feet at this

place. It is worked on the single entry system, and has fan ventilation. Twelve miners and three day hands are employed. This mine was found in poor conditon owing to the air course having caved in. The pillars are being drawn, and the mine will soon be abandoned. Picks are used for mining the coal.

ECLIPSE

Is situated on a switch of the Ohio Southern R. R. and is operated by the Eclipse Coal Co., Jackson, Ohio. E. O. Roberts, Jackson, Ohio, is superintendent, and E. T. Hopkins, of the same place, is mine boss. It is a drift opening penetrating the No. 2 vein of coal which varies in thickness at this point from 25 to 38 inches. It is operated on the single entry plan and has furnace ventilation. Twenty-six miners and thirteen day men are employed. This mine was found in a very poor condition owing to the carelessness of the management in firing the furnace, and the brattices leaking, being built of slate and rock. I requested that the furnace be properly fired during the working hours and all the brattices made air tight, which when completed will place the mine in an improved condition. Picks are used in mining the coal.

HURD SHAFT

Is located on the Ohio Southern R. R. and is operated by the Hurd Coal Co., Jackson, Ohio. George Wheldon, Coalton, Ohio, is superintendent, and J. J. Rowe of the same place is mine boss. This is a shaft opening penetrating the No. 2 vein of coal. It is operated on the single entry plan and is ventilated by means of a fan. Eighteen miners and seven day men are employed. Two visits were made during the year. On my first visit this mine was found in a very poor condition. The air course was completely caved in, rendering it impossible to gain an entrance to the fan. There was no air at the working faces. I ordered mining suspended, until the air courses were cleaned up, and the mine placed in proper condition. On my second visit I found the air course leading to the fan and air shaft had been cleaned out but no air course was found leading from the air shaft to the entries in operation, and the mine was in an unfit condition to resume operations. I ordered an air course leading to the second west entry, and some changes made in the trap doors, which after being completed improved conditions so far as to justify the resumption of work. The coal will soon be exhausted and the mine abandoned. Picks are used for mining the coal.

NORTHERN

Is located west of Glenroy on the O. S. & C., H. & D. R. R's, and is operated by Jones, Morgan & Armstrong, Jackson, Ohio. Dan C. Jones, Jackson, Ohio, is superintendent, and David R. Jones, Coalton, Ohio, is mine boss. This is a shaft opening 45 feet in depth to the No. 2 seam

of coal which varies from 30 to 40 inches in thickness at this point. It is operated on the single entry system, and has fan ventilation. Twenty miners and thirteen day hands are employed. The south side of the mine was found in bad condition, owing to the brattices being rotten and the air coming from the old workings, rendering it necessary to suspend this portion of the mine. The north side of the mine was also in bad condition, caused by the air course being filled with slate from the many falls which occur here. I ordered the air course cleaned at once, and new brattices built which improved conditions to such an extent as to permit the mine to resume operation. The coal here will soon be exhausted, and the mine abandoned. Picks are used for mining the coal.

PRICE

Is located on a switch of the Ohio Southern Railway, and is operated by Gosline & Barbour, Toledo, Ohio. J. C. Hurd, Jackson, Ohio, is superintendent, and Arthur Mapes, of the same place, is mine boss. This is a drift to the No. 2 seam of coal which is about 26 inches in thickness at this point. It is conducted on the single entry plan, and is ventilated by a furnace. Thirty-four miners and fourteen day men are employed. This mine is in a very poor condition. On the fourth west entry seven men were stopped for working ahead of the air, and six were stopped for the same reason on the first west entry. The second west entry was stopped entirely, there being no air. A new air course was ordered driven to conduct the air to the working faces. Conditions were improved to such an extent that the workmen were permitted to resume work under fair conditions. Picks are used for mining the coal.

VICTOR NO. 1

Is situated near Coalton, on the C., H. & D. Railway, and is operated by the Victor Coal Co., Jackson, Ohio. T. J. Evans, Coalton, Ohio, is superintendent, and John Whiting of the same place is mine boss. This is a drift opening to the No. 2 seam of coal, which varies in thickness from 13 to 30 inches. It is operated on the single entry system, and is ventilated by means of a furnace. Fourteen miners and six day men find employment here. This mine was found in fair condition. All the men were working on the main entry. Picks are used in mining the coal.

COMET

Is located west of Wellston, Ohio, on the Ohio Southern Railroad, and is operated by the Comet Coal Co., Dayton, Ohio. Peter Gallagher has entire supervision. This is a shaft opening 68 feet in depth into the No. 2 vein of coal which at this point varies in thickness from three to three and one-half feet. It is worked on the double entry plan, and is ventilated by a fan. Twenty-one miners and eleven day hands are employed.

This mine was found in fair condition, with the exception of there being no check doors to conduct the air into the rooms on the working faces. The doors were ordered erected, and the air course cleaned out at the air shaft in order to increase the volume of air.

ELIZA

This mine has been worked out and abandoned within the year.

SCIOTO COUNTY.

IRISH HOLLOW

Is an iron ore mine located near Gervias, Ohio, and is operated by the Hanging Rock Iron Co., Gervias, Ohio. L. W. Doty is general superintendent, and John Coyer is mine boss. This is a drift into the block ore seam of coal which is from 6 to 28 inches in thickness. It is conducted on the long wall and single entry system, and is ventilated by a furnace. Twenty-two miners and five day men are employed. This mine was in poor condition, the furnace being choked, which was adjusted by the management and the condition of the mine was greatly improved. On September 4th, T. W. Doty, who had been manager of this mine for many years, was killed under very sad circumstances. This mine is situated about five miles north of the N. & W. Railway to which a tram railroad is built from the mine. Mr. Doty was returning to the mine on an empty train, and had gotten about one-half of the distance when rounding a curve a loaded train, through some misunderstanding, started from the mine and collided with the empty train on which Mr. Doty was returning to the mine. In his endeavors to extricate himself from the wrecking cars he was struck and thrown between the cars, and from his injuries died the following day. Picks are used in mining the coal.

VINTON COUNTY.

ORETON

Is situated at Oreton, Ohio, on the Hocking Valley R. R., and is operated by the Vinton County Coal Co., Dayton, Ohio. W. M. Ellis, Oreton, Ohio, is superintendent, and Henry Ebberts, of the same place, is mine boss. This opening is a drift into the No. 4 seam of coal which is from four feet to four feet and four inches in thickness. It is worked on the single entry system, and is ventilated by a furnace. Thirty miners and seven day men are employed. This mine was in very poor condition owing to the air course leading from the first east entry being filled with fallen slate. I requested that the air course be cleaned and that check doors be erected on all butt entries which materially improved conditions. Picks are used for mining the coal.

ELK FORK

Is located at Elk Fork, on the Hocking Valley R. R., and is operated by the Elk Fork Coal Co., Elk Fork, Ohio. W. P. Porter, Elk Fork, is superintendent, and August Ruff is mine boss. It is a shaft opening into the No. 2 seam of coal which is from 22 to 44 inches in thickness. It is worked on the double entry plan and is ventilated by a fan. Sixty-five miners and seventeen day men are employed. This is a new mine and was found in good condition. It is equipped with all modern improvements. Picks are used in mining the coal.

REPORT OF DAVID H. WILLIAMS,

Inspector of the Second District, from November 15, 1899, to
November 15, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR: — In compliance with the custom of the mining department, I herewith submit to you the second annual report of my visits to the mines located in the second district, from November 15, 1899, to November 15, 1900.

In my endeavor to fully discharge the duties of the district mine inspector, I have visited the mines under my charge as often as time and the other duties of the office would permit. While a large percent of the mines were generally found in fair condition, I frequently found one in a state of disorder due to the various elements of danger that follow in the wake of the miner's vocation. In some instances it was necessary to cause operations to cease until the safety of the workmen was secured.

While always keeping in mind the importance of good ventilation, and other sanitary conditions, essential to the health of the miners, it has been my highest aim in the discharge of my duties to preserve the lives of the men entrusted to my care, yet notwithstanding my many admonitions for watchfulness and care, ten of our craftsmen have met with untimely deaths in the mines of this district during the time covered by this report. Nine of the unfortunate accidents occurred in Athens county, and one in Meigs. The following is a list of the mines at which these accidents occurred: Minker Run, one; No. 24, one; Greendale, one; Jobs Mine, at Hollister, Ohio, two, which are not mentioned in the body of this report; Howard McLaughlin was killed at the face of the slope by a fall of slate while John Thorp was killed by falling from the top of the power house on which he was engaged as a carpenter. The three remaining accidents are accredited to Phoenix No. 2 mine, a full account of which will be found in the report of that mine.

A list of improvements made, and of the accidents occurring will be found in the body of this report.

I am glad to acknowledge the courtesies and pleasant receptions accorded me in my official visits by both operators and miners. I am also very grateful to yourself and R. M. Haseltine, who was chief inspector for the first five months covered by this report, for the assistance and kind criticism which have aided me so much in my efforts to perform the duties of my position. I am yours very sincerely

D. H. WILLIAMS,

Inspector Second District.

Glouster, Ohio, November 15, 1900.

ATHENS COUNTY.

MINKER RUN

Is located near Nelsonville, Ohio, on the C. H. V. & T. R. R., and is operated by the Hocking Valley Coal Co. Mell Robb is both superintendent and mine boss. They employ 150 fillers and 50 day hands. It is a drift opening and penetrates the No. 6 seam of coal which is six feet thick at this point. It is worked on the double entry system, and is ventilated by means of a fan. The mine is equipped with rope haulage, and the coal is mined with machines operated by compressed air. I made nine visits to this mine during the year. On February 23, I found the mine in fair condition except in the fifteenth and sixteenth east entries in which the air course was partly closed. I ordered this remedied at once, and suggested that check doors be placed on those entries. On March 24th, I found these entries in poor condition, due to the doors and brattices being out of repair. I gave the mine boss seven days in which to place these entries in good condition. On April 6th I found the mine idle and that my former requests had been complied with. On May 21 I tested the railroad scales and found them accurate. On July 11th, I was called to investigate the accident of Elmer Evans, who was killed in room No. 16 on the 14th east entry, by a fall of slate. On August 9th, that portion of the mine being worked was in fair condition. There had been a squeeze on the 13th and 14th east entries, reaching from room No. 7 to No. 20. This means a suspension of work in that part of the mine for the time being. On September 13th, the mine was idle. On September 24th, the scales were tested and found accurate.

NO. 10X OR ORBISTON

Is located at Orbiston, on the Snow Fork Branch of the C. H. V. & T. R. R., and is operated by the Sunday Creek Coal Co. C. C. Sharp is superintendent, and Thos. Stiff is mine boss. One hundred and seventy-five miners and thirty-nine day hands are employed. It is a slope opening worked on the double entry system, and is ventilated by means of a fan. It penetrates the No. 6 vein of coal, which is six feet thick at this point. The mine is equipped with rope haulage, and machines operated by electricity are used in mining the coal. On February 20th I found the mine in bad condition, owing to the fan which was used as a means of ventilating the mine being too small for ventilating purposes. I requested that a larger fan be procured at once. On August 8th and September 24th I again found the mine in poor condition. On September 24th I ordered the mine to cease operations until more satisfactory arrangements could be made. On September 26th I met Mr. Sharp at his request to make arrangements for reopening the mine. He promised to repair the old fan as well as it could be and to put in

a new one within eight days. On October 13th, I found the new fan, sixteen feet in diameter, placed over the new air shaft. It is capable of making fifty-five revolutions per minute, and furnishes 70,000 cubic feet of air. The mine was then in good condition for the first time in its history.

CARBONDALE NOS. 2 AND 3

Are located at Carbondale Station on the Mineral City Branch of the B. & O. S. W. Railway, and are owned and operated by the Carbondale Coal Co., under the personal supervision of M. A. Doolittle. Eighty-nine miners and nineteen day men are employed here. They are drift openings worked on the double entry system, and are ventilated by means of two fans. They penetrate the No. 6 seam of coal which has a thickness of about four feet at this place. On December 13th I found the rooms on the east entry in poor condition, and requested the mine boss to place check doors in these entries, in order that more air could be brought into these rooms. On May 31st, they were both found in fair condition.

GLENMORE OR WEST FLOODWOOD

Is situated at West Floodwood on the C., H. V. & T. R. R. and is operated by Geo. Silcott, who is both superintendent and mine boss. Fourteen miners and five day men are employed at this mine. It is a drift opening, worked on the double entry system, and is ventilated by means of a furnace. It penetrates the No. 6 seam of coal which is from four to five feet in thickness at this point. On July 6th, the mine was found idle, and no inspection was made. On July 16th, the mine was found in a very unsatisfactory condition, owing to the doors and brattices being out of repair. I requested the mine boss to repair these at once. On October 19th the mine was again idle, and no inspection was made.

DOANVILLE

Is located at Doanville on the C., H. V. & T. R. R., and is operated by the Columbus and Hocking Coal and Iron Co. E. B. Pedlow is superintendent, and Frank Culley is mine boss. There are three slopes at this mine, two of which will be used as manways in the future. At present they are openings into the No. 6 vein of coal which has a thickness varying from six to seven feet. They expect this mine to become one of the largest in the "Hocking field." It will be worked on the double entry system, and ventilated by means of fans. The coal will be cut by electric power, but the manner of hauling has not as yet been determined. On May 18th, I found the mine in good condition. On May 19th, I was called to investigate the accident of Clarence Welson, who lost his life on the slate dump, in trying to dump a slate car. On August 23rd, the mine was found in fair condition.

SHAFER

Is located at West Floodwood, a station on the C. H. V. & T. R. R., and is operated by the Shafer Coal Co. G. V. Shafer is superintendent, and Ed Shafer is mine boss. They employ twelve miners and three day hands. The opening is a drift, worked on the double entry plan, and is ventilated by means of a fire basket placed at the bottom of the air shaft. It penetrates the No. 6 seam of coal which is from four to five feet thick at this point. On April 5th operations were suspended and no inspection was made. On October 19th the mine was in good condition.

SOMERS NO. 1, 2, 3, 4 AND 5

Are located at Boyle's Crossing on the C., H. V. & T. R. R., and are operated by the Somers Coal Co. Zeth Williams is manager, and Jess Murphy is mine boss. Ninety-five miners and fourteen cutters and eighteen day hands are employed. These are drift openings penetrating the No. 6 vein of coal, which is very faulty at this point. No. 1 is the principal opening, and is ventilated by fan pressure. Nos. 2, 3, 4 and 5 are only temporary openings for the purpose of removing the coal between the crop lines and the fault. These are worked on the double entry plan, and are ventilated by means of fire baskets hung at the bottom of the air shaft. This ventilating arrangement is very satisfactory. The coal is cut and hauled by electric power. On February 27th and also on May 17th I found the No. 1 in good condition, but on August 10, it was in very bad condition, the doors and brattices being in need of repair. The mine boss was given ten days in which to make the necessary repairs. On August 20th, I found that my previous requests had been complied with. On May 17th Nos. 2 and 3 mines were found in good condition. On August 10th the No. 4 mine was in need of more air, the baskets being too small. On August 20th, the new ventilating baskets were in and all was satisfactory. On October 18th No. 5 was found in good condition. On the date of October the 18th the scales were tested and found accurate.

ELM ROCK

Is situated near Floodwood on the C., H. V. & T. R. R., and is operated by Price and Patton. W. Brick is both superintendent and mine boss. Seventy miners and six cutters and thirteen day hands are employed here. It is a drift opening worked on the double entry system, and is ventilated by means of a fire basket hung at the bottom of the air shaft. The coal is cut and hauled by electricity. On April 5th the mine was in fair condition, but on June 23rd it was in much worse condition, the doors and brattices being in need of repair. I requested that the necessary repairs be made within ten days. On July 5th I found that the repairs had been made, and the mine in good condition. On October 1st it was found that the current of air was not strong enough to supply

the number of men that were at work, the number having increased by twenty-five men since the time I had last visited the mine. Finding by a test that there was only 6,000 cubic feet of air to supply seventy-three men and five horses, I at once requested the mine boss to place a larger fire in the basket which he did with excellent results, increasing the volume to 14,900 cubic feet. The mine was now in good condition.

GREENDALE

Is located near Murray City on the Snow Fork Branch of the C., H. V. & T. R. R. and is operated by the Greendale Mining Co. It is a slope penetrating the No. 6 seam of coal which is six feet thick at this place. It is conducted on the double entry plan and is ventilated by a fan. The coal is cut by electric machines and hauled to the tippie by means of a rope. It employs 140 fillers, 20 cutters and 18 inside men. On February 21st the mine was in good condition, but on August 2nd it was found in bad condition owing to the fact that the men had been idle for the previous two weeks, during which time the fan had not been kept running. Upon beginning operations it was found that some black damp was mixed with the air. I requested the mine to cease operations until it could be gotten in proper condition, which request was granted.

CLAY NO. 6

Is located one mile west of Nelsonville on the C., H. V. & T. R. R., and is owned and operated by the Nelsonville Sewer Pipe Co. Sixteen men are employed under the supervision of D. E. Dew. This mine is a drift opening, worked on the advancing entry system with a view of working it on the "long wall retreating system." Furnaces are used as a means of ventilation. It penetrates the No. 7 seam of coal, the product being used for the manufacture of brick at the company's factory. On December 5th, February 22nd, and July 22nd, the mine was visited and each time was found in good condition.

HALF MOON

Is situated near Buchtel, on the Snow Fork Branch of the C., H. V. & T. R. R., and is operated by J. M. Stillwell. The opening is a drift penetrating the No. 6 vein of coal to a depth of six feet. Thirty-five miners and seven day hands are employed. The mine is under the entire supervision of J. M. Stillwell. I requested that the furnace be kept more steady in its operation. The machine portion of the mine is being worked in a practical manner, the remaining part of the mine being pillar work. On May 4th, it was found in bad condition, due to a fall of roof closing the inlet. On August 22nd, the mine was again found in bad condition, for lack of sufficient ventilation. I requested that

stack be built on the air shaft and a fire lighted at the bottom of the air shaft. This was done, and on September 12th the mine was in fair condition.

WELLS

Is located near Boiler's Crossing on the C., H. V. & T. Railroad, and is operated by H. & L. J. Wells. Twelve miners and two day men find employment here. It is worked on the single entry system, and is ventilated by natural means. The coal is loaded over a tippie into railroad cars. On February 26th, it was in fair condition, and on October 18th, it was found idle. I tested the scales and found them correct.

MAPLE HILL

Is situated about three miles north of Nelsonville, on the Monday Creek Branch of the C. H. V. & T. Railroad, and is operated by the Maple Hill Coal Co. It employs 120 miners and 24 day hands. Joshua Spencer, is superintendent, and Jas. Moore, is mine boss. It is a drift opening, penetrating the No. 6 seam of coal, worked on the double entry system, and has fan ventilation. Electric machines are used for mining the coal. On February 21st, and again on the 28th, the mine was found idle, and no inspection was made. On May 3rd, the seventh and eighth east, and seventh and eighth west, two sets of new entries, were without air at their bases, there being no doors on the main entries. I requested doors placed there at once. On May 3rd, and again on August 22nd, I found the mine idle, but on September 13th, I found that my request of May 3rd had been complied with, and that the mine was in fair condition.

DALETON NO. 1 AND 2

Are located at Rawndale on the B. & O. S. W. Railroad, and are operated by the Luhrig Coal Co. John Cunningham, is superintendent and Wm. Bailey, mine boss. Two hundred and thirty-five miners and twenty cutters and 82 day hands are employed. They are shaft openings 135 feet in depth, worked on the double entry plan, both mines being ventilated by means of one fan, as they are connected by intercepting entries. The coal is hauled and mined by electric power. On December 12th, I found these mines in fair condition. On December 19th, by request of the Mine Committee, I tested the Hopper scales at the No. 1 mine and found them correct. On May 1st, the mines were both in fair condition. On July 8th, I was called to investigate the cause of an accident that resulted in the death of Wm. Stemmyer, who was killed by being caught between the car and an entry pillar, on "dark" east entry in the No. 2 shaft. On September 6, I found the mines both in bad condition, due to an insufficient amount of air. I requested that a larger current of air be forced through the mine. Also requested a check door to be placed on the butt entries in order to convey the air through

the rooms, and to close all back breakthroughs in compliance with "General Order No. 1," as set forth by Chief Inspector, E. G. Biddison. Ten days were given in which to comply with these requests. On September 17th, in company with Chief Biddison, I visited these mines and found that most of the orders had been complied with. We requested that the volume of air be increased as it was not up to the standard.

CHAUNCEY OR BEAUMONT

Is situated at Chauncey on the K. & M. Railroad, and is operated by Slater and Poston or the Chauncey Coal Co. It is a shaft opening 125 feet deep penetrating the No. 6 seam of coal to a depth of from $4\frac{1}{2}$ to 6 feet. Jos. Slater is superintendent, and Wm. Embleton is mine boss. It is ventilated by means of a fan, and employs 54 miners, 8 cutters and 20 day men. On November 16th, I found the mine in fair condition with the exception that the north entries were in need of breakthroughs. I asked that these be made at once, and on January 29th, the mine was in good condition. On June 28th it was in fairly good condition, and also on October 17th, with the exception of two east entries which needed doors hung to throw a current of air into them. I requested this done at once.

CRESCENT OR NO. 24

Is located near Jacksonville on the K. & M. Railroad, and is operated by the Northern Fuel Co. F. S. Knox is general manager, and Ed. Lynch is mine boss. It employs 165 fillers, 16 cutters and 45 day men. It is a shaft opening 100 feet deep, worked on the double entry system and is ventilated by means of a fan. It penetrates the No. 6 seam of coal, and by the same means is hauled to the bottom of the shaft. On November 27th, I was called to investigate an accident which occurred on August 27th, but of which I had just then been notified. On the 28th I held an inquest over the body of Adolph Hibscher who had been injured on August 27th. On each of my other visits, viz., December 8th, June 6th, and October 22nd, the mine was in fair order.

NO. 4

Is located at Jacksonville, and is operated by W. P. Rend & Co. Jos. P. Rend is general manager and Dan McBryde is mine boss. It is a shaft opening 110 feet deep, passing through the No. 6 seam of coal. It is worked on the double entry plan and is ventilated by a fan. The coal is mined by electricity and brought to the bottom of the shaft by rope haulage. It employs 130 miners, 18 cutters and 45 day men. With the exception of a few breakthroughs being necessary the mine was found in a satisfactory condition on January 11th. I requested these made at once. On March 9th, at the request of the mine boss, I investigated the safety of the mine as the fan shaft had given way, and filled

the shaft with dirt and timber making it necessary to put down a new air shaft. I found that there was 22,800 cubic feet of air coming down the Davis shaft which was being used as a manway. I therefore, permitted the mine to continue operations. On May 15th, I found the air current was cut down to 12,000 cubic feet, owing to the warm weather, and ordered the mine to cease operations until the law was complied with. On June 17th, I was requested by the Mine Committee to investigate the safety of the mine. It was found safe, and operations were resumed, the amount of air having been brought up to the standard. On July 16th, I tested the scales and found them accurate. On October 22nd, no inspection was made, the mine being idle.

NO 6

Is located at Glouster on the T. & O. C. Railroad, and is operated by W. P. Rend. Jos. Rend is general manager and D. S. Williams is mine boss. The opening is a shaft 90 feet deep penetrating the No. 6 vein of coal six feet in thickness. The coal is cut and hauled by electricity. It employs 125 miners, 18 cutters and 30 day hands. On December 28th I found the mine in good condition. On April 23rd the mine was found in bad condition, the fan being out of repair. I asked that this be remedied at once. On June 20, 21 and 22, the mine was visited for the purpose of investigating the safety of the men while walling off the No. 6 from the No. 2 mine, the latter being on fire. Walls were put in, two of which were placed in the south entries, driven from the No. 2 and connecting the No. 6, while the other walls were placed in rooms which had been driven through from one mine to another. On July 2nd and 20th the scales were tested, and found accurate.

PHOENIX NO. 2

Is situated at Glouster on the T. & O. C. Railroad, and is operated by W. P. Rend. Jos. Rend is general manager, Lewis Jones, superintendent, and John Jones, bank boss. It is a shaft opening 100 feet deep, and is worked on the double entry system, and has fan ventilation, electric machines being used to mine the coal which is brought to the bottom of the shaft by the same power. It employs 125 fillers, 20 cutters and 45 hands. On December 27th, the mine was found in good condition. On January 21st, the Hopper scales were tested and found them discriminating 44 pounds against the miner. I requested that the weight be made good until the scales could be adjusted. On February 12, the scales were found to be weighing accurately. On April 16th, the mine was found in fair condition, with the exception of rooms on the sixth west north and on the fourth west which were driven in a long distance. I requested that checks be placed on these entries in order to convey the air into these rooms. I also asked the mine boss to increase the speed of the fan. On

June 4th, I found my requests of April had been complied with, and that the volume of air had been increased to 6,275 cubic feet. The south side of the mine was at this time in extra good condition with the exception of the 9th and 10th west entries which had been coupled onto the main current from the No. 6 mine. On June 8th I was notified that there had been a terrible explosion on the south side of the mine which had occurred about seven o'clock as the men were going to their work. This terrible calamity had resulted in the death of two of our beloved miners, and the fire boss who for ten years had faithfully performed the duties of that position. After the explosion had taken place it was discovered that the fire boss, Evan Joseph, had not returned to make his report as usual. A recruiting party was organized to search for him and for McClellan and Swanson, two miners who were also missing. It was found impossible to enter the south side of the mine at all as the air passages were filled with a dense volume of smoke caused by a fire discovered on the first and second west entries. The brattices between these two entries were set on fire by some unknown cause. From the evidence given at the coroner's inquest, it was shown that a large volume of smoke had been seen in ten different sets of entries. The men were forced to retreat and had scarcely gotten back when an explosion took place. This fact I think makes it evident that the explosion was caused by gas generated by the fire. At five o'clock there was another tremendous explosion, which completely blew out all the doors and brattices throughout the mine. Fortunately there was no one in the mine at this time except the three unfortunates before mentioned. Chief Inspector Biddison ordered the No. 2 shaft sealed, and that an entry should be made by way of the No. 6 mine for the purpose of rescuing the bodies of the three unfortunates. It required nine days and nights to rescue all the bodies, and three additional days in the endeavor to wall off the fire. It was found too dangerous to continue operations. Chief Inspector E. G. Biddison was notified, and upon examination he ordered the mine sealed which was done for a period of twenty days. It was then reopened by the company and successfully walled off. On July 29th, by request Chief Biddison and myself inspected this mine for the purpose of ascertaining whether it was in a condition to resume operation. We found the south side of the mine decidedly unfit for the resumption of work, the walls not having been carefully built. We requested the walls plastered with lime and sand in order to stop up securely every opening. On July 29th, we again inspected the south side which we had recently condemned. It was pronounced in good condition. I requested that check doors be placed on all butt entries for the purpose of conveying the air to all parts of the mine. On October 5th, I found the mine in fair condition, most of the checks having been put in.

NO. 10

Is situated at Derthick on a branch of the T. & O. C. Railway, about two miles from Glouster, Ohio, and is operated by the Sunday Creek Coal Co. C. C. Sharp is superintendent, and John F. Roberts is mine boss. It employs 200 fillers, 18 cutters and 6 drillers, 6 pick men and 69 day men. It is a shaft opening 110 feet deep worked on the double entry system, and is ventilated by means of a fan. It penetrates the No. 6 vein of coal to a depth of about 6 feet. Electric machines are used for mining the coal, which is hauled to the bottom by electric motors. On November 29th and December 1st, I found the breakthroughs badly filled up with refuse. I asked that this be remedied; otherwise the mine was in fair condition. On January 12th, the scales were tested and found accurate. On March 5th, the mine being idle no inspection was made. On March 19th and 21st, both sides were in fair condition. On July 20th and 27th, it was found in good condition, with the exception that the check door system had not been put into effect. A request was made that this be done immediately in compliance with General Order No. 1.

KISTLER NO. 16

Is located two miles northwest of Glouster, on a branch of the T. & O. C. Railroad, and is operated by the Courtright Coal Co., Columbus, Ohio. It is a shaft opening 90 feet deep into the No. 6 seam of coal which is 6 feet in thickness at this point. It is worked strictly on the triple entry system, this being the only mine in the valley that is conducted in this manner. It is my opinion that this would be a good system to be adopted in other mines, as there is an advantage to be gained in haulage as well as in the mode of ventilation. It has been demonstrated that this mine gives better general satisfaction to all concerned than any other mine in the district, from the fact that it is always found in good condition. It is ventilated by two fans, the volume of air being driven into the main split, which divides itself by passing through the over cast, the one traveling east and the other west, and meeting at the head of the main north entry and return to the hoisting shaft which is used as an outlet. The mine is under the direct supervision of D. C. Thomas, David Wallace being mine boss. One hundred and ninety fillers, eighteen cutters and forty-three day hands are employed. The coal which is cut by machines, is hauled to the bottom of the hoisting shaft by electric motors. On February 2nd, the mine was idle owing to the scarcity of cars, and no inspection was made. On February 24th, it was found in good condition. On May 21st, in company with District Mine Inspector R. M. Mason of the First District, the mine was visited and found in its usual good condition. On October 6th the mine was idle, but on the 16th, the date of my last visit the mine was found in good condition.

OAKDALE QR JUMBO.

Is situated at Oakdale on the C. S. & H. Railway, and is operated by the North Star Coal Co. L. D. Lampman is general manager, and H. N. Mallen is mine boss. It is a shaft opening 90 feet deep which penetrates the No. 6 vein of coal to a depth of 6 feet. It is conducted on the double entry plan, and has fan ventilation. It employs fifty-five fillers, twenty-four day hands and 12 cutters. On December 22nd, by request the railroad scales were tested and found accurate. On March 6th, it was found that there were too many men employed on the 3rd and 4th west entries for the amount of air they were being supplied with. They were requested to increase the volume of air, other than this the mine was in good condition. On June 5th, the mine was found in bad condition the doors and brattices being in need of repair, also the 5th and 6th west entries were in bad condition, the rooms on the 4th west entries having been driven too far, causing the 5th and 6th west entries to break into them, leaving these ten entries without ventilation. They were requested to begin a system of breakthroughs immediately to remedy this defect. On July 26th, the mine was found idle, but in company with the Mine Committee the ladders in the air shaft were inspected, which could be used as a means of escape in case it was shut off from any cause at the main opening. Orders were left for the repair of these ladders. On August 11th I was called to the mine for the purpose of investigating the safety of the mine, an oil well which had been drilled into it, was discovered to be leaking salt water and a little gas. This was finally disposed of by tamping some hemp rope and building a brick wall around the pipe to the roof. On September 21st, the fan engine was found to be in need of repair, and requested that it be attended to at once. On October 15th, the scales were tested and found to be discriminating against the miner one-fifth of the gross weight. The scales were adjusted and the weight made good.

SEDALIA

Is situated in the village of Gloucester on the T. & O. C. Railway, and is operated by Wm. Palmer, John Six being the mine boss. It is a slope opening into the No. 7 vein of coal, which is about four and two-thirds feet thick at this place. It is conducted on the double entry system, and is ventilated by a furnace. The coal is mined by electric machines and is hauled to the tipple by means of a tail rope. It employs forty-five fillers, eight cutters and twenty-five day hands. On December 29th the mine was found in fair condition. On March 2nd and again on April 27th it was found idle, and no inspections were made. On October 25th the mine was in good condition. I also found a slope sunk at the head of the fourth east entry which was used as a manway, and also for the purpose of pumping out the water in the mine and for ventilation.

BLACK DIAMOND

Is located at Lathrop on a branch of the T. & O. C. R. R. and is operated by the Black Diamond Coal Co., under the supervision of Geo. Green. This is a drift opening, worked on the double entry plan and is ventilated by means of a fan. It penetrates the No. 8 seam of coal, which is about eight feet thick and separated in the middle by about three feet of slate and fire clay. It employs seventy-six fillers, eight cutters and eighteen day men. Electric machines are used for mining the coal, which is hauled to the tippie by a motor. On November 25th a few rooms on the 5th east entries were in need of some breakthroughs. I requested these to cease operations until breakthroughs could be made. I also requested that several check doors be placed on the butt entries to convey the air into the rooms. On April 2nd the mine was found in fair condition. On November 2nd it was found in good condition with the exception of the fifth east entry which had a great deal of bad top. I requested that this entry be timbered at once.

BROADWELL

Is situated at Broadwell on the T. & O. C. R. R., and is operated by the Broadwell Coal Co. O. B. Guard is general manager, and G. W. Haybron is mine boss. This is a drift opening into the No. 8 seam of coal which is eleven feet thick at this place, worked on the double entry system, and has furnace ventilation. The coal is mined by picks which is hauled to the tippie by means of rope haulage. This mine employs twenty-nine miners and six day men. On January 2nd the mine was found in good condition. On the 7th, by request, the Hopper scales were tested and no defect found in them. On September 28th the mine was idle and no inspection was made. On October 31st the mine was found in fair condition.

BIG RUN

Is located at Big Run on the T. & O. C. R. R. and is owned and operated by C. A. Nice. It employs twenty-eight miners and six day men. It is a slope opening penetrating the No. 8 seam of coal and is eight feet thick at this point. This is separated in the center by a three-foot layer of slate and stone. It is conducted on the double entry plan and has fan ventilation. The coal is mined by picks and is hauled to the tippie by means of rope haulage. On January 4th the mine was found in good condition. On September 28th it was idle and no inspection was made. On October 31st it was found that they had adopted the double entry system, and that all the single entries had been stopped. This places the mine in good condition.

SCHULER OR SHARPSBURG

Is situated at Sharpsburg on the T. & O. C. Extension and is owned and operated by Jacob Schuler. It employs fifteen miners and two day

men. This is a drift opening worked on the double entry system and is ventilated by means of a fire built at the bottom of the air shaft. The coal is being mined with picks, and is hauled to the mouth of the mine and delivered to the hopper by means of an incline. On January 2nd and again on November 2nd the mine was found in good condition.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
C. P. Evans.....	Drift	C. L. Poston.....	9	Athens.
No. 29	"	M. L. Wilson.....	9	Nelsonville.
Martin	"	J. Martin	2	Stewart.
Mill Myer	"	A. M. Millmyer.....	1	Sharpsburg.
Love	"	Geo. Love	2	Jacksonville.
Patch	"	Vernon Patch	2	"
Gallagher	"	John Gallagher	1	Buchtel.
Coe Hill	"	A. Juniper	9	Nelsonville.
Hastings	"	R. C. M. Hastings.....	7	Chauncey.
Klondike	"	Nelsonville S. P. Co...	7	Nelsonville.

GALLIA COUNTY.

CARL NOS. 1 AND 2

Are located near Cheshire on the C., H. V. & T. Railway, and are operated by E. L. Carl. H. V. Carl is superintendent. They are drift openings into the No. 8 seam of coal to a thickness of four feet. They are worked on the double entry system and are ventilated by means of a furnace. Thirty-six miners and six day men are employed. The coal from the No. 2 mine is hauled about one-half mile in road wagons and loaded into cars. On March 14th they were found in good condition. On November 12th, as was anticipated, the two mines were coupled together. It was evident that by making the No. 2 mine the inlet to the furnace, it would cause less friction and would supply the miners with fresh air and throw the old workings on the outlet of air. This move was advised made as soon as convenient.

LAWRENCE COUNTY.

NEWCASTLE

Is situated about three miles north of the Ohio river at the terminus of a short railway running from the company's furnace at Hanging Rock. It is owned by the Hanging Rock Coal Co. E. B. Williard is general manager and Hugh Shields is mine boss. It employs thirty-seven miners and thirteen day hands in mining coal, clay and limestone, one strata overlying the other. The opening is a drift worked on the single entry plan and ventilated by natural pressure. It penetrates the No. 5 seam of coal under which slopes are driven in excavating the clay and limestone seams which are about from three and one-half to five and one-half feet thick, respectively. On November 22nd and August 1st the mine was idle on account of the dull trade. The coal is inferior in quality and therefore has not much of a market. On November 9th it was found in fair condition.

PINE GROVE ORE NO. 4

Is located near Pine Grove, and is owned and operated by the Hanging Rock Iron Co., under the supervision of E. L. Lambert. It is a drift opening worked on the single entry system, and is ventilated by a furnace. It employs fifteen miners and twenty-five outside day hands. The strata of iron ore varies from five to twelve inches. About three and one-half feet of slate in order to make enough room to follow the vein. On November 23rd the breakthroughs were found too small to convey a sufficient amount of air. At my request they were enlarged, and on November 8th the mine was found in fair condition.

PINE GROVE LIME STONE

Is located at the same place as the Pine Grove Ore No. 4 mine, and is operated by the same company. Eighteen miners and one day hand are employed. It is a drift opening worked on the single entry plan, and has furnace ventilation. It penetrates the seam of lime to a depth of about six feet. On November 28th this mine was in good condition.

BELFONT

Is situated at Vesuvius, a station on the line of the Iron railway, and is operated by the Belfont Iron Works. It employs twenty miners and eight day men under the supervision of John Farmer. It is a drift opening worked on the single entry system, and has furnace ventilation. The No. 5 seam of coal is here penetrated to a depth of three and one-third feet. On November 21st the mine was found in good condition. On May 9th it was suspended on account of the Belfont Iron Works employing natural gas as a means of heating. On August 2nd the mine was still suspended.

LAWRENCE MILL

Is located near Vesuvius on the Iron Railway, and is operated by Pirrung & Son. Twenty-two miners and five day hands are employed under the supervision of Wm. Pirrung. It is a drift opening worked in rather a haphazard manner, having neither system in its entirety and being ventilated by means of a furnace. It penetrates the No. 5 seam of coal, which is about three feet thick at this place. On May 9th I found operations suspended, the Lawrence Mill mine, which consumed the output, having begun the use of natural gas. On August 2nd I found the company repairing the hoppers for the purpose of shipping coal. On November 8th the mine was found in fair condition.

KELLEY

Is located at Ironton and is operated by the Kelley Iron and Nail Co. Conrad Klein is both superintendent and mine boss. It employs thirty-five miners and seven day hands. This is a drift opening into the No. 5 seam of coal, which is about three and one-fourth feet thick at this point. It is conducted on the double entry plan and has furnace ventilation. On May 10th and again on November 10th the mine was found in good condition. This mine is one of the best ventilated mines in the district. It has three inlets along which the miners are working and this furnishes an abundance of fresh air.

HALLEY

Is situated near Aetna on the Iron Railway, and is operated by Halley & Wells. Twenty-five miners and one day hand are employed here, under the supervision of John Justice. It is a drift opening, worked on the single entry system, and is ventilated by a furnace. On November 23rd it was found in fair condition. On August 9th the mine being idle, no inspection was made. On November 8th it was in good condition. It now has a new furnace which is giving very satisfactory results, and the working force has increased to twenty-two miners and five day men.

KELLEY LIME

Is located at Bartlett, eleven miles north of Ironton, and is under the general management of Mrs. Kelley, with Peter Burk as mine boss. It is a drift opening penetrating the seven-foot seam of lime, and is worked on the single entry system with natural pressure, supported by three inlets and outlets. On November 23rd and August 3rd the dates of my last two visits, the mine was found in good condition.

HALLS

Is situated at Mt. Vernon on the C., H. & D. R. R., and is operated by John F. Hall Coal Co., with Isaac Hall as superintendent, and Ed. Bro-

hard as mine boss. Forty miners and eight day hands are employed. It is a drift opening conducted on the single entry system, and has furnace ventilation. It penetrates the limestone seam of coal which is three feet thick at this point. On May 8th it was in bad condition, owing to the absence of check doors and being operated on the single entry system. I requested the company to put in a system of check doors and breakthroughs, or the mining laws would be enforced. On November 7th the mine had been idle for a period of four months, the miners being out on a strike for scale rates. It has now resumed operations, and my requests of May 8th have been complied with. The mine is now in fair condition.

MEIGS COUNTY.

SYRACUSE SHAFT

Is located at Syracuse on the banks of the Ohio river, and is operated by the Syracuse Coal and Salt Co., with L. H. Bridgeman as superintendent and Thomas Mainwaring as mine boss. It employs seventy miners and thirty-six day hands. It is a shaft opening 60 feet deep, worked on the double entry plan, and has fan ventilation. It penetrates the No. 8 seam of coal, which is four feet thick at this place. On March 29th the mine was found in bad condition owing to the doors and brattices being out of repair. I asked that this be remedied at once, and that the volume of air should be increased. On January 17th and again on October 9th the mine was found idle. On November 15th I found the doors and brattices in fair condition, and that the fan was running at an increased speed of 35 revolutions per minute, but as the air was still deficient I advised the mine boss to separate the mines and employ some other system of ventilation for the slope.

SYRACUSE SLOPE

Is situated near the Syracuse shaft mine, and is joined to it by intercepting entries, and is operated by the same company. It employs twenty-one miners and three day hands. It is a slope opening worked on the same plan, and ventilated by the same means as the shaft mine. The coal is hauled to the tippie by means of a small stationary engine and a Manila cable. On January 17th the mines were on a strike due to the scale rates. On March 29th the mine was in fair condition. On October 9th the mine was again idle. On November 15th in company with Chief Biddison the mine was visited and found in a very unsatisfactory condition, the volume of air being only 2,160 cubic feet per minute, which was polluted with black damp to a considerable extent. We insisted that the shaft and slope be separated and some suitable means of ventilation be adopted.

PEACOCK

Is located at Pomeroy and is operated by the Peacock Coal Co. Martin Ebersbach is superintendent and Wm. Ebersbach is mine boss. It employs 120 miners and 42 day hands. It is a drift opening worked on the double entry system, and is ventilated by means of a furnace. The No. 8 seam of coal is here penetrated and the coal is about four feet in thickness. On January 16, February 10 and July 10 it was found idle on account of the low water in the river. On August 28 the mine was in good condition. On October 11 the mine being idle, no inspection was made.

ROLLING MILL

Is located in Pomeroy and is operated by Martin Ebersbach, who is general manager. It employs sixteen miners and five day hands under the supervision of Val Ebersbach. It is a drift opening worked on the double entry plan and has furnace ventilation. It enters the No. 8 seam of coal which is here four feet thick. On February 6th the mine was in good condition. On July 10th it was found suspended as the rolling mill was shut down, cutting off the demand for its output.

CHARTER OAK

Is situated at Pomeroy and is operated by the Charter Oak Fuel Co. B. J. Malone is general manager and Si Dill is mine boss. Sixty miners and thirteen day hands are employed. It is a drift opening worked on the double entry system and has fan ventilation. The No. 8 vein of coal is here penetrated to a depth of about four feet. On January 16th the mine was found idle. On February 6th it was in a bad condition, the slate brattices between the entries being in need of repair. In order to furnish more air in the main working places I requested that this matter be attended to at once, and found on August 30th that the work of repair was in full operation. The working portion of the mine was now in fair condition, with the exception of one room which was in need of a breakthrough. I marked one off and put Mr. Payne at work on it. On October 11th the mine being idle, no inspection was made.

KOEHLER

Is located at Sugar Run and is operated by Koehler Bros., under the supervision of Dan. Diehl. It employs fifteen miners and three day hands. The double entry system is in use with fan ventilation. At this point is found the No. 8 seam of coal which is four feet thick. The coal is hauled two miles in wagons to the salt furnaces where it is consumed. On August 29th my only visit to this mine found it in good condition.

BUCKEYE

Is located at Pomeroy and is operated by the Buckeye Salt Co. Chas. McQuigg is general manager, and Ed Weeks is mine boss. It employs sixteen miners and five day hands. It is a drift opening worked on the double entry system, and has natural ventilation. It penetrates the No. 8 seam of coal to a depth of four feet. On January 16th I found the mine idle on account of a funeral, but on February 6th it was found in good condition. On July 10th it was again idle, the salt works which consumed the output being idle. On August 27th by request I measured the mine cars which were supposed to hold twenty bushels, but which upon measuring I found to be short a fractional part of a bushel. On October 10th I found some rooms on the second east entry had some very bad roof. The men were cautioned to watch this carefully and were warned not to run any risk. The mine at this time was in fair condition.

COAL RIDGE

Is situated at Carrs Run in Pomeroy and is owned by the Coal Ridge Salt Co. It is a drift opening penetrating the No. 8 seam of coal and is worked on the double entry system. It is ventilated by natural ventilation. A new mine is now being opened which will have furnace ventilation. Dan Daniels is superintendent. It employs sixteen miners and four day men. On January 16th this mine was found in good condition, except in one room which was in need of a breakthrough. This was ordered made at once. On July 10th the mine was idle. On October 16th the old mine was found to be worked out, and the new one opened up from which the coal was being hauled by way of the old mine entries to the salt works which are located near by.

SILVER RUN

Is located four miles west of Middleport on the C., H. V. & T. Railway, and is operated by W. C. Russell. It employs thirty-three miners and seven day hands. It is a drift opening into the No. 8 seam of coal which is here four feet thick. It is worked on the double entry system, and has an eight foot fan for ventilation. On May 6th and November 12th the mine was in good condition.

MINERSVILLE

Is located on the bank of the Ohio river, and is operated by Russell & Baer. This mine is almost worked out. Twenty-two miners and five day men find employment here. It penetrates the No. 8 seam of coal and is at present worked on a haphazard plan. On July 10th I found an insufficient circulation of air in that part of the mine being worked. I requested doors placed in the jaws of the rooms to remedy this defect. I also requested the furnace which had been idle to be placed in operation.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening	Name of Owner or Operator.	Number of Men.	P. O. Address.
Logan	Drift	Martin Ebersbach	2	Pomeroy.
Dabney	"	Kauff Bros	9	Middleport.
Diamond	"	Thompson Bros	4	"

WASHINGTON COUNTY.

FELIX

Is located at Coal Run on the Muskingum river, and is operated by Webster & Blake, F. Beebe being mine boss. It is a drift opening penetrating a small seam of coal about three feet thick. It is conducted on the single entry plan and has furnace ventilation. On January 3rd I found the furnace in need of repair, and gave notice to the company to give this matter attention at once, and also to place some check doors on the rooms. On January 24th I found that these repairs had been made, and the mine in good condition. On September 28, the mine was found in good condition.

LYONS

Is a drift opening and is operated by Ross & Barker, Coal Run, Ohio.

Two visits were made outside of the district. One on August 24th and 25th in Perry county, one visit being made at the No. 21 mine, and one on August 7th to the New Pittsburgh No. 7 mine located in Hocking county. These visits were made at the request of Chief Mine Inspector E. G. Biddison.

REPORT OF D. B. WILSON,

Inspector of the Third District, from November 15, 1899, to
November 15, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR:— In compliance with the custom of the Mining Department, I herewith submit my annual report of the visits made to the mines of the Third District of the State of Ohio. In my endeavor to discharge the duties of District Mine Inspector I have visited the mines under my charge as often as time and the other duties of the office would permit. By request of the Chief Inspector of Mines, I was called to the Phoenix No. 2 and Briar Ridge No. 6 mines, Athens county, where three men lost their lives by an explosion in the No. 2 mine, on June 8, 1900. The cause of the explosion was due to a fire that originated in the mine. Three inspectors with a number of miners were employed at the mine for thirteen days, rescuing the bodies and walling in the fire. On March 26, 1900, a fire broke out in Rends No. 3 mine in Perry county. I was on the ground for thirteen days walling this fire in, which has not been reported in my regular visits. No accidents attended this fire.

It is with deep regret that I report nine fatal accidents which occurred in my own district during the year that has just closed, a full account of which will be found in the report which follows. I am sorry to say that several of these accidents were caused by negligence on the part of the unfortunate victims themselves.

I may say in conclusion that the year has been a very prosperous one for the miners of my district, and I trust it may continue for some time to come. In submitting my report, I wish to heartily thank the miners and operators of my district for their courteous and kindly treatment, and you for your valuable counsel and encouragement.

Very respectfully,

D. B. WILSON,

Inspector Third District.

Corning, Ohio, November 15, 1900.

MINE NO. 8.

Is located at Corning on the T. & O. C. Railroad, and is owned by the Sunday Creek Coal Co., Columbus, Ohio. C. C. Sharp, Corning, Ohio, is superintendent, and David Cook, of the same address is mine boss. It is a shaft opening fifty feet in depth, worked on the double entry system, and is ventilated by means of two fans. It is opened into the No. 6 seam of coal, which is here from 10 to 12 feet in thickness. About 150 loaders, thirty pick miners and fourteen machine men and 48 day men are employed. I visited this mine six times and found it in fair condition each time. The entries and tracks are generally kept in fair condition. Breakthroughs in rooms and entries as a general rule are well attended. The coal is hauled from the interior of the mine to the shaft by means of a tail rope. The coal is cut by the Morgan-Gardner electric machines, the dynamo being operated by a gas engine of 175 horse power. The Mining Laws have not been observed, as a rule, but as a general thing they have endeavored to operate this mine in accordance with the law.

NO. 21

Is situated at Carrington on the Glouster Branch of the T. & O. C. Railroad, and is owned and operated by the same company as the No. 8 mine. C. C. Sharp is superintendent, and Sherman Schull, Carrington, Ohio, is mine boss. It is a slope opening into the No. 6 seam of coal which at this point is from six to ten feet thick. It is worked on the double entry system, and has fan ventilation. One hundred and fifty miners, 14 machine hands and fifty day hands are employed here during the year. Fourteen visits were made to this mine during the time covered by this report. On July 25th, in company with the Chief Inspector of Mines, and Deputy Mine Inspector D. H. Williams, I inspected this mine, when it was found that the ventilation was weaker in circulation than it had ever been found to be on my former visits. This was due to the weakness of the compressed air with which the fan engine was operated. The men employed at this mine claimed that the ventilation was always better on the days on which I would inspect the mine than at any other time. I imagined the men were laboring under the impression that I notified the superintendent or mine boss of the time when I expected to visit the mine. This I have been requested to do by a few mine bosses, but I have never been guilty of doing so, and never will be. I have endeavored in every possible way to make this mine comfortable for the men, but it is a very difficult mine to handle, the roof being very bad, and a great amount of water coming from three old mines surrounding the property. A great deal of trouble is encountered by the roof falling in the air courses, and the general conditions of this mine have not been up to the standard owing to the facts as stated above, and so long as these conditions exist, th

mine cannot be operated in compliance with the Mining Laws of the State. The coal is hauled by electric motors, and is cut by the Morgan Gardner Electric Mining machines.

NO. 13 SOUTH SIDE

Is located at New Hamburg on the Glouster Branch of the T. & O. C. Railroad, and is operated by the Franklin Fuel Co., Columbus, Ohio. Thos. Underwood, Corning, Ohio, is superintendent, and John Clark of the same place is mine boss. It is a drift opening into the No. 7 vein of coal, and at this point is from five to six feet in thickness. It is conducted on the double entry system, and is ventilated by a furnace. Thirty miners and nine day men are employed. This mine was visited five times, and on each visit the mine was found in fair condition. The general condition at this mine has been very good for the number of men that are employed. The roof is not very good, and at present it looks as if the coal would be cut out by a fault. As far as fair conditions would permit the law has been carried out.

NO. 12.

Is located in Sulphur Spring Hollow, one mile from Carrington on the Glouster Branch of the T. & O. C Railroad, and is operated by the same company as the No. 13 mine. Thos. Underwood, is superintendent, and John Wile, Hemlock, Ohio, is mine boss. It is a slope opening which penetrates the No. 6 seam of coal at a depth of from five to seven feet. It is worked on the double entry plan, and is ventilated by a fan. Eighty miners, and twenty-two day hands are employed here during the year. This mine has been visited six times during the year. The roof is very poor, but the company have put forth every effort to make it safe. The entries are cross timbered every three feet. Under these circumstances the general conditions of the mine are fair. The coal is taken from the mine by an engine, and from the inside by horse power. The coal is cut by electric machines of the Jeffrey type. This mine has not been conducted in accordance with the Mining Laws, but I am of the opinion that so far as it has been possible the law has been complied with. The roof is so bad that breakthroughs in rooms cannot be made and kept as they should be after they have been made, many of the places being so bad that they cannot be made where they should be.

NO. 20

Is located near Hemlock on the Glouster Branch of the T. & O. C. Railroad, and is owned and operated by the Franklin Fuel Co., and is under the same supervision as the No. 12 mine. It is a slope opening which penetrates the No. 6 seam of coal, and at this point is about six feet in thickness. The double entry system is in use with fan ventilation. Fifty

miners, twelve machine men, and twenty-two day hands are employed. This mine was visited seven times during the year. The general conditions of this mine are not good. The roof is very bad, and it is a difficult mine to handle. The entries are all cross timbered every three feet, and the company have expended a great deal of money with a view of obtaining a better circulation of air into the working faces. A number of improvements have been made, and the miners seem satisfied that the company are doing everything in their power to place the mine in a safe condition. The coal is hauled from the interior of the mine to the tippie by means of a tail rope, the coal being cut with electric machines of the Jeffrey make. This mine has not been up to the standard of the Mining Law, but as much so as possible under the existing conditions, in fact, it is impossible to operate mines of this nature in accordance with the Mining Laws. The company and their employes deserve credit for the efforts they have put forth in the betterment of conditions at this mine. It is impossible to make breakthroughs at the proper place owing to the condition of the roof.

CONGO NO. 1

Is located at Congo, on the C. S. & H. Railroad, and is operated by the Congo Coal and Mining Co., Columbus, Ohio. Samuel Pascoe, Congo, Ohio, is superintendent, and John W. Taylor of the same place is mine boss. This is a shaft opening 35 feet deep into the No. 6 vein of coal and is from eight to fourteen feet in thickness at this point. It is worked on the double entry system, and is ventilated by a fan. One hundred and seventy miners, eighteen machine men and seventy day men are employed. This mine was visited ten times during the year. With but few exceptions this mine has been operated in accordance with the Mining Law. There are four butt entries cut out by a fault, and in approaching this fault the roof is generally bad. The coal is cut by Jeffrey Electric machines and is hauled from the interior of the mine by motors of the same make. On December 20, 1899, I was called to this mine to investigate the cause of the death of Patrick Collins, who was killed on that date by a piece of slate falling from the roof while in the act of loading a car. He was working in company with his father drawing top coal when a thin piece of slate fell from the roof, striking him on the head killing him instantly. Mr. Collins was considered a very careful man, and was totally ignorant of the fact that the slate was in the condition it was. This was purely an accident.

CONGO NO. 2

Is situated at Congo on the C., S. & H. Railroad, and is owned and operated by the same company as the No. 1 mine. Samuel Pascoe is superintendent, and Wm. Turnbull, Congo, Ohio, is mine boss. This is a shaft opening 40 feet deep to the No. 6 seam of coal which is at this

point from twelve to fourteen feet in thickness. One hundred and eighty miners, eighteen machine men, and fifty-eight day men are employed. This mine was visited ten times during the year. General conditions are good. On May 3rd, 1900, I was called to investigate the cause of the death of John Nairn who was killed by a piece of slate falling from the roof, striking him on the head, killing him instantly. He was in the act of loading a car when the slate fell. The place had been sounded a short time before the accident occurred, and they were of the opinion that it was all right. It was purely an accident. On May 12, 1900, I was again called to this mine to investigate an accident which resulted in the death of Charles Muircraft, in the same place where Mr. Nairn was killed. He was drawing top coal, and had fired a shot which left some loose coal hanging where they were to load the car. Instead of taking down the loose coal they went under it to load the car when the coal fell injuring him so badly that he died a few hours later. This mine has not been strictly conducted according to the Mining Law. The mine boss has been careless with his trappers.

MINGO

Is located at Hemlock on the C. S. & H. Railroad, and is owned by the Congo Coal and Mining Co., Columbus, Ohio. Samuel Pascoe is superintendent, and Chas. Call, Hemlock, Ohio, is mine boss. This is a shaft opening 30 feet deep penetrating the No. 6 seam of coal which at this point is six feet in thickness. It is worked on the double entry system, and is ventilated by a fire basket. Twenty-four miners and eight day hands are employed here. Four visits were made to this mine during the year. The general conditions here are not good owing to the bad roof, and the amount of mud and water with which they have to contend. The coal is hauled to the shaft by horses, and some of the coal is cut by the Jeffrey electric machines.

REND NO. 3

Is located at Rendville, on the T. & O. C. Railway, and is owned and operated by W. P. Rend, Chicago. Lewis Jones, Glouster, Ohio, is superintendent, and Wm. Dennis, Rendville, Ohio, is mine boss. It is a shaft opening 30 feet in depth, opening into the No. 6 seam of coal, which is here twelve feet thick. One hundred and ten miners, and 52 day hands are employed. This mine was visited ten times, in addition to fifteen days that I spent in helping to extinguish the fire which had broken out between the fourth and fifth west entries, making in all twenty-five visits. The conditions here are fair. The roads are generally kept clean and dry, and the ventilation is fairly good. The men shoot at all times during the day, making a great deal of smoke to contend with. The coal is cut by the Morgan Gardner electric machines, and is hauled to the shaft by means of a tail rope. On November 28th, 1899, I was called to this mine

to investigate the death of John Fine, who was run over by a trip of cars, dying about one hour later. A number of improvements have been made during the year, a good travelling way having been made through the inlet air way, and in case a fire should break out the men have ready access to the outlet in fresh air. The double entry system is in use with fan ventilation.

NO 3

Is located near New Straitsville, Ohio, on the Rock Run Branch of the B. & O. R. R., and is owned and operated by the Columbus and Hocking Coal & Iron Co., Columbus, Ohio. E. B. Pedlow, New Straitsville, Ohio, is superintendent, and Wm. Ward, of the same place, is mine boss. This is a drift opening into the No. 6 seam of coal which is from 8 to 10 feet thick at this place. It is conducted on the double entry system, and has fan ventilation. 140 miners, and 40 day hands find employment here. It was visited four times during the year, and was found in good condition on each visit. The coal is hauled from the interior of the mine to the tippie by means of a tail rope, and the coal is cut by electric machines of the Jeffrey type. I consider this a first class mine in every respect.

NO 3 A

Is situated near the No. 3 mine, and is owned and operated by the same Company, and under the same Management. This is also a drift opening into the same vein of coal and is from 8 to 10 feet in thickness. It is operated on the double entry plan and is ventilated by a fan. 162 miners and 40 day hands find employment here. The mine was visited four times during the year, and the general condition of the mine was found satisfactory on each visit. The coal is hauled from the interior of the mine by the same rope as the No. 3 mine and is dumped at the same tippie. The coal is cut by electric mining machines.

NO. 139

Is situated near New Straitsville, Ohio, on the H. V. & T. Railroad, and is operated by Geo. Howe & Son, New Straitsville, Ohio. It is a drift opening into the No. 6 seam of coal and varies in thickness at this point from ten to twelve feet. It is worked on the single entry system, and has natural ventilation. Twenty miners and four day men find employment here. This mine was visited three times during the year, and found in fair condition for a mine of this kind. All of the work is drawing pillars, and taking out small pieces of crop coal. Under these circumstances we do not expect the mine to be kept in first class condition.

NO. 37 NORTH WEST

Is located near New Straitsville, Ohio, on the H. V. & T. R. R., and is operated by the Essex Coal Co., New Straitsville, Ohio. C. Essex is

superintendent, and H. H. Essex is mine boss. This is a drift opening penetrating the No. 6 vein of coal and varies from ten to twelve feet in thickness. It is conducted on both the single and double entry system, and has furnace ventilation. Twenty-two miners and four day men are employed. This mine was visited three times during the year and found in fair condition. General conditions are good. The greater number of the men employed here are interested in the company

NO. 49

Is located near Straitsville, on the C., H. V. & T. R. R., and is owned and operated by Alexander & Co., New Straitsville, Ohio. Wm. Carmichael has full supervision. This is a drift opening into the No. 6 vein of coal which at this point varies in thickness from ten to twelve feet. It is worked on the single entry system, and has natural ventilation. Twelve miners find employment here, six of whom have leased the mine. One visit was made, and the mine found in good condition.

NO. 53

Is located near New Straitsville, on the Rock Run branch of the B. & O. R. R., and is operated by Ambrose Gibbs, New Straitsville, Ohio, who has the entire supervision. It is a drift opening to the No. 6 seam of coal and is from ten to twelve feet thick at this place. The single entry system is used with natural ventilation. Twenty miners and two day men are employed here. The mine was visited four times during the year, but on three of these visits the mine was found idle and no inspection was made. At the time of the last inspection it was found in fair condition. They are now engaged in working out a piece of coal left there by two old mines, and there is no opportunity of keeping it in first class condition.

NO. 18

Is situated one mile north of Rendville, Ohio, on the T. & O. C. R. R., and is operated by the Wm. Job Coal Co., Glouster, Ohio. Wm. Job, of the same place, is superintendent, and Jas. W. Wheatley is mine boss. The opening is a slope which penetrates the No. 6 vein of coal at a depth of from eight to thirteen feet. It is worked on the double entry system, and has fan ventilation. One hundred miners, twelve machine men and twenty-four day men are employed here. Eight visits were made during the year. The general conditions here are good with the exception of a few rooms where the roof is very bad. The coal is hauled out of the mine by an endless chain, the coal being cut by the use of a Morgan Gardner electric machine. Conditions for the future are promising.

FANNY

Is located at Shawnee, on the C. S. & H. R. R. and is operated by Taylor, Williams & Jenkins, Shawnee, Ohio. Daniel Jenkins is superintendent, and Edward Abram is mine boss. The opening is a drift made into the No. 6 seam of coal and is from six to eight feet thick at this point. It was visited six times during the year. On December 18 the scales were tested and found correct. Thirty-five miners and four day hands are employed. This mine is now abandoned.

FURNACE NO. 2

Is situated at Shawnee, on the B. & O. R. R., and is operated by E. W. Lewis & Co., Shawnee, Ohio. E. W. Lewis has entire supervision. This is a drift opening made into the No. 6 vein of coal which at this place varies in thickness from five to eight feet. It worked on the double entry system, and is ventilated by means of a fire basket and exhaust steam from a pump. Forty miners and six day hands are employed. Five visits were made during the year, and the mine found in fair condition at each inspection. The greater number of men are engaged in drawing pillars in old mines where they were left several years ago. On June 18th the scales were tested and found them weighing correctly. The coal is hauled from the interior of the mine to the tippie by means of an endless rope.

IRON POINT NO. 3

Is located at Shawnee, on the B. & O. R. R., and is operated by the Iron Point Low Vein Coal Co., Shawnee, Ohio. D. S. Richards has entire supervision. This is a new drift opening made into the No. 6 vein of coal which is here about five feet thick. It is opened on the double entry plan, and is ventilated by a fire basket. Twenty miners and two day men are employed. One visit was made and the mine found in first class condition.

UPSON NO. 1

Is situated at Shawnee, on the B. & O. R. R., and is operated by the Upson Coal and Mining Co., Newark, Ohio. R. E. Williams has entire supervision. It is a drift opening made into the No. 6 seam of coal, which is here about ten feet thick. It is conducted on the double entry plan, and has furnace ventilation. Sixty-five loaders, thirty-five pick miners, six machine men and thirty-nine day men are employed here. This mine was visited four times during the year. The ventilation of this mine was not up to the standard, which was due to the mine being nearly worked out, and a great many pillars having been drawn. The coal is hauled by an electric motor, and is cut by electric chain machines of the Jeffrey type.

XX

Is situated at Shawnee, on the C., S. & H. R. R., and is owned by Taylor, Williams & Jenkins Co., Columbus, Ohio. Daniel Jenkins, Shawnee, Ohio, is superintendent, and Robert Gibbons is mine boss. The opening is a drift into the No. 6 seam of coal which is here from six to ten feet thick. It is worked on the double entry plan and has natural ventilation. Fifty miners, and nine day men are employed. The mine was visited five times during the year, and found in good condition. The work has been the drawing of pillars, which would cave into the surface making a good current of air. Some of the men have started on the east side of the main entry in a solid piece of coal, and a boiler and fan have been installed. On November 1st the scales were tested and found correct.

BRISTOL NO. 1

Is located at Bristol Junction on the Shawnee Branch of the B. & O. R. R., and is operated by the Bristol Coal Co., Newark, Ohio. S. W. Butts, Bristol, Ohio, is superintendent, and E. W. Stalter, of the same place, is mine boss. This opening is a drift which penetrates the No. 6 seam of coal which at this point is three feet thick. It is worked partly on the double and partly on the single entry system, and is ventilated by means of a fan. Forty miners and six day hands are employed. This mine was visited six times during the year, and found in good condition with the exception of the visit made on the 14th of October when I found a squeeze on the first and second west entries. These two entries have been abandoned, and they are now driving two west entries four hundred feet from the old entries. The coal is hauled from the interior of the mine by a tail rope.

BLOCK NORTH SIDE

Is situated one mile west of McLuney on the Cincinnati and Muskingum Valley Railroad. Chas. Tague is superintendent, and Lon Tague, both of McLuney, is mine boss. This is a drift opening made into the No. 6 seam of coal which at this point is three feet thick. It is worked on both the double and single entry systems, and is ventilated by means of a furnace. Thirty-two miners and six day men are employed. Four visits were made during the year. The general conditions are good for a mine that is nearing exhaustion. The coal is hauled by mules. This mine has always been conducted in a proper manner.

LYONSDALE NO. 1

Is located at the tunnel two miles west of McLuney, on the C. & M. V. R. R., and is operated by M. Meenan; Lyonsdale, Ohio, who is also manager. J. J. Meenan is mine boss. This is a drift opening made into the No. 6 seam of coal which at this point is three feet and six inches in thickness. It is conducted on the double entry plan and is ventilated

by means of a furnace. Twenty-eight miners and four day hands are employed. This mine was visited four times during the year. The general condition of the mine has been very good with the exception of on my last visit when it was found that the ventilation was weak at the face of the entries. Some of the break-throughs were leaking, and this was ordered repaired. The mode of haulage is mule power.

LYONSDALE NO. 2

Is situated on the opposite side of the hollow from the No. 1 mine, and is owned and managed by the same parties. It is also a drift opening into the same vein of coal, the coal being three and one-half feet in thickness. It is worked on the double entry system and has natural ventilation. This opening was made during the summer and an air shaft put down which was sixty feet in depth. But one visit was made to this mine, when it was found in first-class condition. Twenty-two miners and two day men are employed.

SUPERIOR

Is located one mile south of New Hamburg on the Glouster branch of the T. & O. C. R. R., and is owned and managed by L. C. Tippet; Samuel Tippet, Glouster, Ohio, is mine boss. The opening is a drift made into the No. 7 vein of coal, the coal being four and one-half feet in thickness at this place. The double entry system is in use with furnace ventilation. Ten miners and two day men are employed. Three visits were made during the year, and the mine found in fair condition. They are now drawing pillars and the mine will soon be abandoned. The coal was cut off around the mine by a fault.

CHESTNUT HILL NO. 2

Is situated near Redfield, on the C., S. & H. Railway, and is operated by the Coyle Coal Co., Redfield, Ohio. George Coyle has entire supervision. It is a drift opening made into the No. 5 seam of coal which varies from three to four feet in thickness. It is worked on the double entry system, and is ventilated by a fire basket. Ten miners and two day men are employed here. This mine was visited three times and found in fair condition. This mine is now abandoned.

CHESTNUT HILL NO. 3

This was a new mine opened near the No. 2 mine and was opened for the purpose of securing a piece of crop coal which was left in the old mine. It was under the same management as the No. 2 mine, and employed twelve men. This mine is now abandoned.

CHESTNUT RIDGE

Is located near Redfield on the C., S. & H. R. R., and was owned and managed by A. P. Simons, Redfield, Ohio. It was a drift opening made into the No. 5 vein of coal, and at this point was from three to four feet in thickness. It was worked on the double entry system, and was ventilated by means of an open fire. Twenty miners and six day hands are employed. It was visited four times during the year, when it was found in fair condition. Most of the work was the drawing of pillars. On May 1st, 1900, I was called to this mine to investigate the cause of the death of Lewis Thompson who was fatally injured by a fall of draw slate on the 30th day of April, 1900, and died while they were taking him to his home. He was working in company with his father, and had been warned by the men at work in the next room of the danger, and he was requested to leave the place. He desired to finish loading a car, but before the car was loaded the slate fell upon him.

PEACOCK

Is situated at Hemlock, on the C., S. & H. R. R., and is operated by Roberts and Davis. Evan Roberts, Hemlock, Ohio, has full supervision. It is a shaft opening twenty feet deep made into the No. 6 seam of coal where the coal is six feet thick. The single and double entry systems are in use, with furnace ventilation. Thirty-seven miners and eight day hands are employed here. This mine was visited seven times during the period covered by this report. This mine is nearly worked out and not in a very good condition. On June 4th, 1900, I was called to this mine to investigate the cause of the death of Henry Vogal, who was killed by a fall of draw slate. He was employed drawing pillars, and was requested to place a prop under the slate, but he failed to do so, and as a result met his death.

SHAWNEE VALLEY

Is located at Shawnee, on the C., S. & H. R. R., and is operated by Maynard Bros., Columbus, Ohio. William E. Williams has entire charge of this mine. It is a drift opening made into the No. 6 seam of coal, which is here ten feet in thickness. The double entry system is in use with furnace ventilation. Fifty miners and eight day hands are employed. This mine was visited five times. On November 2 I tested the scales and found them weighing correctly. The mine is poorly ventilated from the fact that it is all pillar work. Otherwise the mine was in good condition. The coal is hauled from the interior of the mine to the tippie by means of an endless rope.

BRIAR HILL

Is located on the C., S. & H. R. R., two and one-half miles south of Deavertown Station. J. G. Underwood has entire supervision. It is a

slope opening penetrating the No. 6 seam of coal which at this point is three feet and eight inches in thickness. It is worked on the double entry system and has furnace ventilation. Ten miners and two day men are employed. This mine was visited five times and found in fair condition for the number of men employed. The coal is hauled to the slope with Shetland ponies, and taken to the tipple by a rope.

BEECH GROVE NO. 6

Is located near McLuney on the C. & M. V. Railway. H. J. Knoedler is operator and superintendent, and Marion Young is mine boss. This is a drift opening penetrating the No. 6 vein of coal at a depth of three feet and six inches. It is worked on the single entry system, and has furnace ventilation. Forty-five miners and six day men are employed here. It was visited five times during the year, and was found in fair condition for a mine which is worked on the single entry plan.

KEYSTONE NO. 1

Is situated near Crooksville on the C. & M. V. R. R., and is owned by the Zanesville Coal Co. Thos. Opie has entire supervision. This opening is a drift penetrating the No. 6 seam of coal which is here three feet eight inches in thickness. The double entry system is in use with fan ventilation. One hundred and twenty-two miners and twenty-two day hands are employed. Six visits were made to this mine during the year. The general conditions here are good. The coal is hauled from the interior of the mine to the tipple by a Morgan Gardner electric motor.

KEYSTONE NO. 2

Is located at McLuney, on the C. & M. V. Railway and is operated by the Zanesville Coal Co. Nelson Spencer is superintendent and mine boss. It is a drift opening penetrating the No. 6 seam of coal which at this point is three feet and six inches in thickness. It is worked on the double entry system, and is ventilated by a furnace. Ten miners and two day men are employed. This is a new mine, and it is in good condition.

UNION NORTH SIDE

Is located two miles east of Crooksville on the C. & M. V. Railroad, and is operated by the Ohio Coal and Cement Co., Columbus, Ohio. David Mathews is superintendent, and Chas. Conn is mine boss. This is a drift opening made into the No. 6 seam of coal which is here three feet and six inches in thickness. It is conducted on the double entry plan and has furnace ventilation. Seventeen mines and one day hand are employed here. Three visits were made to this mine during the year. The general conditions here are good.

NEW CRESCENT

Is situated one mile from Roseville, on the C. & M. V. R. R., and is operated by the Crescent Mining Co., Roseville, Ohio. H. H. Guy is superintendent, and William Reed is mine boss. The opening is a drift penetrating the No. 6 seam of coal which at this place is four feet in thickness. It is worked on the double entry system, and has furnace ventilation. Forty miners and eight day men are employed. Four visits were made during the year. General conditions are good. This mine has not been up to the standard of the mining laws, inasmuch as they evade making break-throughs as much as possible.

DEW

Is situated three miles south of Corning on the T. & O. C. R. R., and is operated by the Leyshon Coal Co., Burr Oak, Ohio. David Thomas, New Straitsville, Ohio, is superintendent, and T. J. Leyshon, Burr Oak, Ohio, is mine boss. It is a drift opening made into the No. 7 seam of coal which is here four feet thick. The double entry system is in use with natural ventilation. Thirteen miners and two day hands are employed. It has been visited four times during the year. It is not in very good condition owing to a fault cutting the coal out, and the prospects for the future are not promising. At the present time it appears as if they would soon have to abandon the mine.

MIDWAY NO. 1

Is located near Redfield on the C., S. & H. R. R., and is operated by the Wallace Coal Co., Redfield, Ohio. Wm. Wallace is superintendent, and Edward Moore is mine boss. This is a drift opening made into the No. 5 seam of coal and at this point is five feet thick. It is worked on the double entry system, and is ventilated by means of a small fire basket. Ten miners and one day hand are employed here. It was visited twice during the year, and found in good condition at each visit. This is a new mine and for the number of men employed is in good condition.

MIDWAY NO. 2

Is situated near the No. 1 mine, and is operated by the same company, and under the same management. It is also a drift opening made into the No. 5 seam of coal, worked on the same system, and is ventilated by an open fire. Sixteen miners and one day hand are employed. It was visited twice during the year and found in good condition.

MIDWAY NO. 3

Is located near the Nos. 1 and 2 mines, and is under the same management, and operated by the same company. It is also a drift opening made in to the same vein of coal, and worked on the same plan. It is ventilated

by a small fire basket. Twenty miners and one day hand are employed. It was visited twice and the conditions good. The coal is all run over the same tippie.

GREEN HOLLOW NO. 4

Is located in Green Hollow near Redfield, on the C., S. & H. R. R., is operated by the Saltillo Coal Co., Redfield, Ohio. Samuel Steel full supervision. This is a drift opening penetrating the No. 6 seam coal, which is here three feet in thickness. It is worked on the down entry plan, and is ventilated by means of a furnace. Ten miners one day hand are employed at this mine. It was visited twice during year, and found in fair condition for the number of men employed.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
No. 5	Drift	Troy Coal Co.....	8	New Straitsville
No. 39	"	Davis & Hughes.....	1	"
No. 47	"	M. Wilson & Co.....	8	"
Martin	"	R. Johnson & Son.....	3	"
Fahey	"	Patrick Fahey .....	...	"
Butler	"	Butler & Donnelly... ..	3	"
Spencer & Haselton...	"	Perry Haselton	6	"
No. 51	"	Geo. Long & Co.....	4	"
Cox No. 11.....	"	Matthew Cox & Co.....	4	"
No. 7	"	White & Thompson....	8	"
No. 77	"	Stewart Coal Co.....	6	"
No. 69	"	Call Hughes & Co.....	8	"
Powel or No. 9.....	"	Emerick & Powel.....	...	"
O'Donnell No. 35....	"	O'Donnell & Co.....	8	"
Black Diamond No. 2.	"	Black Diamond Coal Co.	8	"
Howe	"	George Howe .....	...	"
Cooperative	"	Martin & Roan .....	...	"
Irvin	"	George Irvin	2	New Lexington.
Butler No. 2.....	"	John Butler	8	"
Rodgers No. 3.....	"	George Parker	8	"
Crooksville	"	R. D. Brown.....	3	Crooksville.
Eagle	"	Crawford & Gaver....	4	McCuneville.
Millertown	"	West Stalmsmith	2	Corning.
Ohio Coal No. 1.....	"	Ohio Min. & Mfg. Co..	6	Shawnee.
Gordon	"	McGuire & Robertson..	2	Rose Farm.
CLAY MINES.				
Ohio No. 4.....	Shaft	Ohio Min. & Mfg. Co..	6	Shawnee.

MUSKINGUM COUNTY.

DIAMOND NO. 2

Is located at Romine Station on the Bellaire, Zanesville & Cincinnati Railway, and is operated by C. W. Joslin, Zanesville, Ohio. H. N. Hauk has entire supervision. It is a drift opening into the No. 7 seam of coal and is six feet thick at this place. It is worked on the double entry system, and has furnace ventilation. Ten miners and one day hand are employed here. Two visits were made to this mine during the year. They are now drawing pillars, and the mine will be soon abandoned.

CANNELLVILLE

Is situated at Cannellville on the C., S. & H. R. R., and is operated by John McNally, Dillon, Ohio, with Richard Andres as mine boss. It is a drift opening made into the No. 6 seam of coal which at this place is four feet in thickness. It is worked on the double entry system, and has furnace ventilation. Twelve miners and two day men are employed. It was visited four times during the year and the general conditions fairly good for a small mine. The air was weak at the face of the working faces but on my last visit they had nearly reached a point where they intend to sink an air shaft.

CHARLES HARPER

Is located on Mill Run and is operated by Charles Harper, Zanesville, Ohio, who has the entire supervision. On July 26th, I was called to this mine to investigate the cause of the death of Henry Springfield, who was killed by a fall of slate at the face of room number one on the main entry. He was aware of the dangerousness of the place, and had been requested by the mine boss to take another room, but he insisted upon taking out another cut, and while doing so the slate fell upon him with the above result. This mine is now abandoned.

KINNEY

Is situated near Gaysport, and is operated by D. W. Kinney, of that place. It is a drift opening into a vein of coal eighteen inches in thickness. I was called to this mine on November 24, 1899, to investigate the cause of the death of George Kinney, who was killed by a fall of slate. He was working in a place about seven feet wide, where the roof was full of smooth slips when a piece of slate fell on him with the above result. The slate would weigh about two tons, and fell at the face of the entry.

MAYNARD

Is located at Cannellville, Ohio, on the C., S. & H. R. R., and is operated by the Maynard Bros., Columbus, Ohio. Bruce Mauk, Dillon, Ohio, is superintendent, and Chas. Anderson is mine boss. This is a drift opening into the No. 7 seam of coal and is about four feet thick at this point. The double entry system is in use with furnace ventilation. Thirty-five miners and eight day men are employed. It was visited four times during the year. The general condition of the mine is good, but they are careless with their trap doors. On July 3rd, 1900, I was called to this mine to investigate the accident which resulted in the death of Charles Keith who was killed on the 2nd day of July by a fall of draw slate. In shooting the night before the coal had knocked down some props, and he started to load the coal before replacing them. He was aware that the place was dangerous, and said to some of the men that he would put them up after he had loaded another car, and before the car was loaded the slate fell and killed him instantly.

CHESTNUT VALLEY NO. 1

Is situated near the Marietta Road, two miles from Zanesville, and is operated by Michael Fisher, Zanesville, Ohio. M. L. Fisher, is superintendent, and Wm. Ray, mine boss. The opening is a drift made into the No. 6 vein of coal, which is three feet thick. The single entry system is in use with furnace ventilation. It was visited four times during the year, and found in good condition each time. The coal is hauled out by dogs pulling in front and a man pushing behind. The general condition of this mine is good for a mine of this kind.

PRINCESS

Is located in Coal Hollow near Sealover Station, on the Zanesville and Ohio River Railroad, and is operated by the McCoy Coal Co., Zanesville, Ohio. Perry Smith is superintendent, and J. F. Berkemer, Philo, Ohio, is mine boss. This is a drift opening made into the No. 7 vein of coal which is six feet thick. It is worked on the double entry system, and is ventilated by means of an open fire. Thirty miners and six day hands are employed during the year. Three visits were made and the mine found in good condition each time.

GARRET

Is situated one mile south of Sealover Station on the Z. & O. R. R., and is operated by Jos. Garrett, Philo, Ohio. Spencer Garrett is superintendent, and A. E. Garrett is mine boss. The opening is a drift which penetrates the No. 6 vein of coal which is here thirty inches in thickness. It is conducted on the single entry system and has furnace

ventilation. Fourteen miners and two day hands are employed. It was visited four times during the year. The general condition of this mine is good for a small mine.

WALNUT HILL NO. 2

Is located at Cannellville, Ohio, on the C., S. & H. R. R., and is owned and managed by Wm. H. Blaney, Dillon, Ohio. It is a drift opening penetrating the No. 6 vein of coal which is three feet and eight inches thick at this point. It is worked on the double entry plan and has furnace ventilation. Twenty-four miners and three day men are employed here. Four visits were made to this mine during the year, and found in fair condition at each visit, but like a great many small mines, they use canvass in the place of doors, and a good part of the time this is torn to pieces by the cars. Mr. Blaney was informed on my last visit that he would have to erect doors and put on trappers.

PEACOCK

Is situated at Cannellville, Ohio, on the C., S. & H. R. R., and is operated and managed by Jack Davis, Dillon, Ohio. It is a drift opening made into the No. 6 vein of coal and is here three feet thick. It is worked partly on the single and partly on the double entry system and is ventilated by means of a furnace. Eleven miners and two day men are employed. Three visits were made during the year, and the mine found in good condition. This mine has always been found in very good condition.

BLUE ROCK

Is situated at Stone's Station on the Z. & O. R. R., and is operated by the Blue Rock Coal Co., Cedar Run, Ohio. E. J. Souders has the supervision. This is a slope opening penetrating the No. 7 seam of coal and is here four feet thick. It is worked on the double entry system, and has furnace ventilation. Thirty miners and four day hands are employed. It was visited three times during the year. The ventilation in this mine has always been deficient. The mine was closed last September, but the miners agreed with the Company to work until they reached a ravine where an air shaft could be sunk which will be used as an outlet for the men as well as supplying fresh air for them.

KINGS NO. 2

Is located one mile from Gilbert Station on the C. & M. V. R. R., and is operated by A. B. Mullen, Gilbert, Ohio, who has the entire charge of the mine. It is a drift opening into the No. 6 seam of coal, the coal being three feet thick. The single entry system is in use and an open fire is used for the ventilation. Ten miners and one day hand are employed. Two visits were made, and the mine found in fair condition for the number of men employed.

EDWARDS NO. 2

Is located at Canneville, Ohio, on the C., S. & H. R. R., and is operated and managed by C. L. Ballou, Dillon, Ohio. The opening is a drift made into the No. 6 vein of coal and is here three feet six inches thick. It is worked on the double entry plan, and has furnace ventilation. Nine miners and two day men are employed. One visit was made. The mine had been lately opened, and was in good condition. An air shaft and furnace was completed at the time of my visit.

GRANGER

Is located near Buckeye Station on the Zanesville and Ohio River Railroad and is operated by the Siler Coal Co., McConnelsville, Ohio. John Winefordner, Duncans Falls, Ohio, has entire supervision. This is a drift opening into the No. 6 vein of coal, which at this point is three feet eight inches in thickness. It is worked on the double entry system and has furnace ventilation. Sixty-five miners and seven day men are employed. This mine was visited seven times during the year. This mine is generally in a good condition. I requested that a new outlet for the men be provided, the road to the old opening being very poor. They began operations at once to drive from the face of the workings to daylight. This opening is now completed. I tested the Hopper scales on November 8th, and found them weighing correctly.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Harpers 3 Foot.....	Drift	Thos. W. Harper.....	2	Zanesville.
Harpers 4 Foot.....	"	"	8	"
Lehew	"	Geo. M. Lehew	7	"
Moores No. 6.....	"	John Lutz	2	"
Griener No. 1.....	"	J. R. Griener.....	4	"
Hildreth	"	Robert Tumblin	4	"
Chestnut Valley No. 2.	"	Michael Fisher	1	"
Weller	"	W. H. Weller.....	8	"
Weller No. 3.....	"	"	3	"
Weller No. 4.....	"	"	1	"
Melvin No. 2.....	"	Andrew Melvin	2	"
Jos. Moore	"	Jas. & Jos. Bridwell....	3	"
Harper	"	Lewis H. Harper.....	3	"
Spaulding	"	Philip Spaulding	6	"
Griener No. 2.....	"	Harry Griener	2	"
Swanks No. 2.....	"	Noah Swank	2	"
Bealers	"	Chas. A. Barton.....	6	"
Smith No. 2.....	"	Jas. Severance	2	"
Alexander	"	Jas. Alexander	1	"

MINES EMPLOYING LESS THAN TEN MEN — Concluded.

of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
No. 1.....	Drift	Jos. Miles	5	Zanesville.
No. 2.....	"	"	5	"
& German	"	John McNulty	5	"
.....	"	"	1	"
.....	"	Chas. L. Shultz	1	"
No. 2.....	"	Mass Bleakney	3	"
.....	"	Wm. Dickson	4	"
No. 2.....	"	C. W. Joslin	3	"
Grove	"	G. W. Besser	5	"
No. 2.....	"	Geo. Harper	2	"
.....	"	Buckeye Press B. Co. ...	6	"
No. 2.....	"	J. A. Detenbeck	1	"
.....	"	David Henke	5	"
No. 1.....	"	J. W. Foutch	3	"
No. 2.....	"	C. W. Fisher	2	"
No. 3.....	"	"	2	"
rman	"	John German	1	"
.....	"	O. W. Price	2	"
No. 2.....	"	Fowler & Spinks	2	"
No. 2.....	"	Samuel Niebel	2	"
No. 3.....	"	"	2	"
No. 1.....	"	Wm. L. Combs	2	"
.....	"	D. L. Hopkins	2	"
.....	"	Wm. Dixon	7	"
Dewey.....	"	L. M. Plant .....	.....	Frazeyburg.
.....	"	Eli Gourley	4	"
No. 1.....	"	Zed Lindell	4	"
No. 3.....	"	Lockard & Denman	4	"
or Neathers	"	Frank & John Foutch ..	3	"
.....	"	Bagent & Rose	7	"
.....	"	Henry Norman	1	"
No. 2.....	"	Jas. Knight	7	"
1.....	"	A. D. Morrison	1	Dillon.
in No. 1.....	"	John G. Baughman	1	Roseville.
in No. 2.....	"	"	1	"
.....	"	George Leyton	5	Dresden.
peland	"	Edward Feagans	1	"
.....	"	Andrew Snyder	2	Adams Mills.
.....	"	Carson Bowden	1	Dresden.
.....	"	Daniel Fletcher	5	"
.....	"	F. H. F. Egbert .....	.....	"
.....	"	Robert Jamison .....	.....	"
.....	"	Samuel Stuller	2	"
.....	"	Milton Griffen	2	"
.....	"	T. F. Billman	3	Ellis.
No. 4.....	"	A. W. Smith	5	Coaldale.
.....	"	Wm. Dick	6	"
Porter	"	George Porter	3	Hopewell.
.....	"	M. W. Campbell	1	Zanesville.
.....	"	Dennis Natingly	1	"
g	"	Jacob Burrier	1	"

MORGAN COUNTY.

BLACK DIAMOND

Is located one-half mile south of Deavertown Station on the C., S. & R. R., and is operated by the Rose Valley Coal Co., Rose Farm, O. John French is superintendent and L. C. Lucas is mine boss. This is a slope opening into the No. 6 seam of coal which is here eight inches in thickness. It is worked on the double entry system, and has furnace ventilation. Twenty-five miners and five day men are employed. Four visits were made and the mine found in good condition at each visit.

ROSE

Is situated near Deavertown Station on the C., S. & H. R. R., and is operated by Carding Bros., Rose Farm, Ohio. George Carding has entire supervision. It is a drift opening into the No. 6 vein of coal, which is here three feet eight inches thick, worked on the double entry system with furnace ventilation. Twenty miners and three day men are employed. Four visits were made and the mine found in fair condition. On September 1st I tested the scales and found them discriminating ten pounds in hundred against the miner. This was corrected and the scales weighed accurately.

NOBLE COUNTY.

GLENWOOD

Is situated near Glenwood Station on the Cleveland & Marietta Railroad and is operated by J. J. Phillips, Cleveland, Ohio. M. Spiecher is superintendent, and E. A. Davis is mine boss. This is a shaft opening made into the No. 7 seam of coal at a depth of 110 feet. The coal is four feet thick at this place. The mine is worked on the double entry system and is ventilated by a fan. Sixty miners and sixteen day men are employed here. Two visits were made. On my first visit the mine was found in good condition, but on my second visit it was found in poor condition. Several rooms were stopped until they were ventilated in a proper manner. There was also a great deal of mud and water found in this mine. Mr. Turner now has charge of this mine.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Operator. Name of Owner or	Number of Men.	P. O. Address.
Pickinpaw	Drift	John Pickinpaw	3	Sharon.
Baker No. 1.....	"	D. N. Baker.....	2	Hoskinsville.
Baker No. 2.....	"	"	1	"
Stewart	"	Eli Stewart	2	"
Clearey	"	Uriah Cleary	4	Summerfield.
Crawford	"	F. H. Crawford.....	1	"
Meeks	"	J. N. Meeks.....	3	"
Springer	"	Wash Springer	1	Flag.
Vanfossen	"	George Vanfossen	3	"
J. R. Vance.....	"	Hopkins & Morton.....	2	"
Yonally	"	Wm. Yonally	2	"
Day	"	Mrs. Margaret Day.....	2	"
Day No. 2.....	"	"	2	"
Love	"	Theodore Love	6	"
Franklin No. 3.....	"	John A. Franklin.....	2	Whigsville.
Donnelly	"	Jas. Donnelly	1	"
McLaughlin	"	W. M. McLaughlin.....	1	Sarahsville.
Jumbo	"	J. W. Young.....	6	"
Young	"	J. E. Young	6	"
Leisure	"	Willis Leisure	3	Berne.
Smith	"	John J. Smith.....	2	"
Orr	"	Cooley Orr	1	"

REPORT OF THOMAS MCGOUGH,

Inspector of the Fourth District, from November 15, 1899, to November 15, 1900.

To the Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR:— I have the honor to report the location and condition of the mines in the Fourth District from November 15, 1899, to November 15, 1900. The condition of the mines has been fairly good, although the number of fatal accidents have increased over that of previous years during the time I have had charge of the District. These accidents were attributable to various causes, the greater number of them resulting from causes which no mining laws could have prevented, viz: That men will grow careless and neglect to take the necessary precautions, and by subjecting themselves to great risks while engaged in their work, and the larger percentage of accidents result from this cause.

From the latter part of May, when the District was changed, two-thirds of my time was taken up in looking after the sealing of oil and gas wells, which I consider a great injustice. The General Assembly in passing this law should have made provisions for someone whose duty it should have been to especially attend to this. If this cannot be accomplished the law should be repealed, as it is an impossibility for an Inspector to give the mines of his District his attention if his time is taken up with the sealing of oil and gas wells. On the other hand, if he devotes his time to the mines, he must necessarily neglect the other part of his work, and it would appear that proper inspection of the mines is by far the most important, and this was the intention of the founders of the Department.

Thanking you for the many favors of which I have been the recipient, I am,

Very respectfully yours,

THOMAS MCGOUGH.

Inspector of the Fourth District

Bridgeport, Ohio, November 15, 1900.

BELMONT COUNTY.

ECHO

Is located on a branch of the B. & O. R. R., near St. Clairsville, Ohio, and is owned and operated by Troll Bros., St. Clairsville, Ohio. C. Troll is superintendent and Tom Fallett, Neffs, Ohio, is mine boss. It is a drift opening into the No. 8 seam of coal and is five and one-half feet in thickness. Twenty miners and five day hands are employed. Four visits were made during the year, and the mine found in fairly good condition. The double entry system is used, and a furnace ventilates the mine.

BLACK DIAMOND

Is situated on a branch of the B. & O. R. R., near St. Clairsville, Ohio, and is owned and operated by the same parties as the Echo mine. C. Troll, St. Clairsville, Ohio, is superintendent, and M. O'Grady, Neffs, Ohio, is mine boss. This is a drift opening into the No. 8 seam of coal, and is about five and one-half feet in thickness at this place. The double entry system is in use, and a furnace furnishes the ventilation. Four visits were made during the year. The ventilation, which has been poor, has been improved by a new opening, but it is not yet sufficient to properly ventilate the mine. One hundred miners and twenty-one day men are employed.

OHIO AND WEST VIRGINIA.

Is located near the Black Diamond mine, and is owned and managed by the O. & W. Va. Coal Co., St. Clairsville, Ohio. C. Troll of the same place, is superintendent, and James Sklenar, Neffs, Ohio, is mine boss. This is a drift opening into the No. 8 seam of coal, which is here five and one-half feet thick. It is worked on the double entry system, and ventilated by a furnace. Eighty-five miners and eighteen day men are employed. Four visits were made to this mine during the year. The ventilation is impaired, and notwithstanding the fact that an 85-foot addition has been built to the furnace, is still insufficient.

GLEN

Is situated on the B. & O. R. R., near Glencoe, and is owned and operated by the Glen Coal Co., Glencoe, Ohio. J. H. Johnson, Glencoe, is superintendent and mine boss. This is a slope opening fifteen feet deep to the No. 8 seam of coal, and is five and one-half feet in thickness at this point. It is conducted on the double entry system, and has fan ventilation. Sixty three miners and fifteen day men are employed. Three visits were made and the mine found in fair condition. Rope haulage and compressed air machines of the Ingersoll-Sergeant type are in use for mining the coal.

FRANKLIN

Is located near Franklin Station on the B. & O. R. R. It has been suspended during the year.

STANDARD

Is situated on the B. & O. R. R. near Steel, Ohio, and is owned and operated by Alex Neff, Steel, Ohio, who is also superintendent. Robert Kidd, Steel, Ohio, is mine boss. This opening is a drift into the No. 8 seam of coal, and at this point is five and one-half feet high. The double entry system is in use with furnace ventilation. Sixty-seven miners and thirteen day men find employment. Three visits were made to this mine during the year, and found in poor condition, in regard to drainage and ventilation, but the company are driving a new opening outside to improve these conditions. On September 24th, I investigated a fatal accident which resulted in the death of Frank Reese, a miner, who was killed by a piece of soapstone falling upon him, which was due to a slip at the face of his room.

CAPTINA

Is located on the B., Z. & C. R. R., near Armstrong Mills, and is owned and operated by the Captina Coal Co., Armstrong Mills, Ohio. Wm. Rankin of the same place is superintendent, and mine boss. This is a shaft opening sixty-five feet in depth to the No. 8 seam of coal, and is six feet thick at this place. It is worked on the double entry system, and is ventilated by means of a fan. Twenty-three miners and six day men are employed. Three visits were made and conditions were fair.

SHICKS

Is located on the B. & O. R. R. near Bellaire, Ohio, and is owned and operated by M. J. Schick & Co., Bellaire, Ohio. M. Shicks is superintendent and William Turnbull, Klee P. O., is mine boss. This is a drift opening penetrating the No. 8 seam of coal and is five and one-half feet in thickness at this point. Fifty miners and twelve day men are employed here. Four visits were made during the year, and the mine found in fair condition at each visit.

WEGEE

Is situated south of Bellaire, and is owned and operated by the Wegee Coal Co., Ambler, Ohio. John Hall, Jr., Ambler, Ohio, is superintendent and mine boss. It is conducted on the double entry system, and is ventilated by a furnace. Twenty miners and six day men find employment. Two visits were made and on my last visit was compelled to reduce the number of men to fifteen, owing to the ventilation being insufficient. The opening is a slope 150 feet deep into the No. 8 seam of coal and is five and one-half feet thick at this point.

PITTSBURG

located at Bellaire, and is owned and operated by the Pittsburg & Ohio Co., Bellaire, Ohio. W. F. Woods, Bellaire, Ohio, is superintendent and Robert Fielding of the same place is mine boss. The opening is a slope 125 feet in depth penetrating the No. 8 seam of coal to a depth of five and one-half feet. It is conducted on the double entry system, and has furnace ventilation. Seventy-five miners and eighteen men find employment. Seven visits were made during the year. The mine has been a source of annoyance during the whole time, the ventilation being deficient at all times. An air shaft is being sunk in a hasty manner, and mine bosses have been changed about every two months, with every change for the worse, with the exception of the change. Some radical measures will have to be taken to make this mine comply with the mining laws of the department. Electric power is in use, mining machines having been abandoned for the pres-

BELMONT NO. 2

located at Bellaire, and is owned and operated by Rose and Morgan, Bellaire, Ohio. R. C. West, Bellaire, Ohio, is superintendent, and Robert Belby is mine boss. It is a drift opening into the No. 8 seam of coal which is five and one-half feet high at this place. It is worked on the double entry plan, and has furnace ventilation. One hundred miners and thirty day men are employed. Eight visits were made during the year, and the condition of the mine fairly good. Rope haulage is used and the coal is mined by machines of the Jeffrey type. Two fatal accidents occurred during the year. On January 6th three loaded mine cars jumped the track and Chris Schramm, boss driver, was caught between the rib and car, and so badly crushed that death resulted in a few days. The other accident occurred on the first day the tail rope system was inaugurated. As the trip was ascending the grade, the rope broke causing the trip to run back, instantly killing the rope rider. Improvements were ordered to prevent the recurrence of these accidents in the future.

NAIFE MILL

located at Bellaire and is owned and operated by the American Steel Company, Bellaire, Ohio. Chalkey Dawson, Bellaire, Ohio, is superintendent, and Jacob Long of the same place is mine boss. It is a drift opening into the No. 8 seam of coal and is five and one-half feet high at the point. The double entry system is in use, and fan ventilation. Sixty miners and fourteen day hands find employment. Five visits were made during the year, and the mine found in fair order. Electric power and electric machines of the Jeffrey type are used to cut the

AETNA STANDARD

Is situated at Martins Ferry and is owned and operated by the same company as the Nail Mill mine. Roger Ashton, Martin's Ferry, Ohio, is superintendent and mine boss. This is a drift opening into the No. 8 seam of coal and is five and one-half feet high at this point. A furnace is used as a means of ventilation. Two fatal accidents occurred during the year. On February 24th, Michael Burns, a miner, while loading his car, was struck by a piece of falling soapstone, crushing him badly that he died an hour later. The second accident occurred on March 6th. Richard Richards, whose duty it was to attend to a door, was knocked down by a mule passing through, the loaded trip running over him, killing him instantly. The deceased was sixty-seven years of age.

LAUGHLIN

Is located at Martin's Ferry and is owned and operated by the Laughlin Nail Mill Co., Martin's Ferry, Ohio. William Glessner, Martin's Ferry, Ohio, is superintendent, and Charles Woods, mine boss. This is a drift opening into the No. 8 seam of coal, and is five and one-half feet high at this place. It is conducted on the double entry system and is ventilated by means of a fan. Twenty miners and five day men are employed. Five visits were made, and the mine found in fair condition. Rope haulage is in use.

TIN PLATE MINE

This is a new mine situated at Martin's Ferry, and is owned and operated by the American Tin Plate Co., New York. C. A. Robins, Wheeling, W. Va., is superintendent, and Leander Woods, Martin's Ferry, Ohio, is mine boss. It is a drift opening into the No. 8 seam of coal which is five and one-half feet thick at this point. It is worked on the double entry plan, and is ventilated by a fan. Three visits were made during the year. This mine is being opened in first-class order and electric haulage will be used. Fifteen miners and eight day men are employed.

GAYLORD

Is located on the C. & P. R. R., near Don, Ohio, and is owned and operated by the Pittsburg and Cleveland Coal Co., Martin's Ferry, Ohio. J. O. Jones, Don, Ohio, is superintendent, and Robert Applegarth, the same place, is mine boss. This is a drift opening into the No. 8 seam of coal and varies in thickness from five and one-half to seven feet. It is conducted on the double entry system, and is ventilated by a furnace. One hundred miners and twenty day men find employment. Five visits were made during the year, and the general condition of the mine has been unsatisfactory, both in regard to ventilation and drainage, but the new company have, toward the end of the year, been making some needed improvements.

WHEELING CREEK NO. 1

Is situated on the C., L. & W. R. R., two miles west of Bridgeport, and is owned and operated by the Lorain Coal & Dock Co., Cleveland, Ohio. J. E. Waters, Bridgeport, Ohio, is superintendent, and E. Stoker, Drill, Ohio, is mine boss. It is a drift opening to the No. 8 seam of coal which at this point is five and one-half feet in thickness. The double entry system is in use with furnace ventilation. One hundred and fifty miners and forty-eight day men are employed. Three visits were made during the year, and the mine found in fair order. Also found the mining laws being generally observed. Rope haulage is used.

WHEELING CREEK NO. 2

Is located at the same place as the No. 1 mine, and is owned and operated by the same company. It has been suspended during the year, and is now abandoned.

CRESCENT

Is located on the C., L. & W. R. R., at Crescent, Ohio, and is owned and operated by the same company as the Wheeling Creek Nos. 1 and 2 mines. J. E. Waters, Bridgeport, Ohio, is superintendent and William Fitzgerald, Crescent, Ohio, is mine boss. This is a drift opening penetrating the No. 8 seam of coal to a depth of five and one-half feet, worked on the double entry system, with fan ventilation. Two hundred and seventy-five miners and fifty-six day men are employed. Four visits were made, and the mine found in fair condition, but the company have had difficulty in observing the mining laws, due to a squeeze. Electric motor haulage and electric machines of the Morgan-Gardner type have been installed during the year.

BOGGS

Is situated on a branch of the C., L. & W. R. R., near Barton, Ohio, and is owned and operated by E. N. Boggs, Barton, Ohio, who is also superintendent. John Baugh, St. Clairsville, Ohio, is mine boss. This is a drift opening into the No. 8 seam of coal, which at this point is five feet high. It is conducted on the double entry system, and is ventilated by means of a furnace. One hundred and twenty-five miners and nineteen day men are employed. Five visits were made during the year, and the general condition of this mine has been unsatisfactory in regard to ventilation. It was found necessary to warn the superintendent that unless needed repairs were made within thirty days the mine would be closed. The work was done within the specified time, and the mine was not suspended, but there is still room for improvements.

TAGGARTS

Is located on the St. Clairsville branch of the C. & L. W. R. R., near Barton, Ohio, and is operated by E. N. Boggs, Barton,

Ohio, who is also superintendent. John Schindler is mine boss, and is located at Barton, Ohio. It is worked on the double entry plan and is ventilated by a furnace. Forty-two miners and nine day men find employment. Five visits were made during the year, and the drainage found unsatisfactory, during the first part of the year, but a ditch has been cut and the main entry timbered, which places the mine in fair order at the close of the inspection year. The opening is a drift into the No. 8 seam of coal and is five feet thick at this place.

MAPLE HILL

Is situated on the C. & L. W. R. R., near Barton, Ohio, and is owned and operated by the Maple Hill Coal Co., Barton, Ohio. George Ather-ton is superintendent, and John Woodyatt is mine boss. It is a drift opening into the No. 8 seam of coal which at this point is five feet thick. The double entry system is in use with fan ventilation. One hundred and sixty-five miners and twenty-five day men are employed. Four visits were made during the year, and the mine found in good order. Electric haulage has been installed, and the third rail system is used instead of an overhead trolley, the power being taken from the third rail, and the results are quite satisfactory. Safety holes were ordered made, and complied with.

FLUSHING

Is located on the C. & L. W. R. R., near Flushing, and is owned and operated by the Flushing Coal Co., Flushing, Ohio. W. G. Williams, Flushing, Ohio, is superintendent, and mine boss. This is a drift opening into the No. 8 A seam of coal which is four feet in thickness at this point. The triple entry system is in use, with fan ventilation. Sixty miners and twenty-one day hands are employed. Four visits were made and the mine found in good order. Compressed air machines of the Harrison type are used to cut the coal. The mining laws have been generally observed.

KENNON NO. 2

Is located on the C. & L. W. R. R., near Flushing, and is owned and operated by the Kennon Coal Co., Cleveland, Ohio. J. C. Hobson, Flushing, Ohio, is superintendent, and Gilbert Hanson, of the same place is mine boss. It is a drift opening into the No. 8 seam of coal which is about four and one-half feet thick at this point. The double entry system is used with fan ventilation. Ninety-five miners and twenty day men find employment. Four visits were made and the mine found in fair order. There is a great deal of water to contend with in this mine, however, the mining laws are well observed.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Boston	Drift	David Boston	4	Bridgeport.
Koehnline	"	Koehnline & Son	8	"
McConaughy	"	J. McConaughy	4	"
Meister No. 1	"	Meister Bros	6	"
Meister No. 2	"	"	2	"
O'Hara	"	John Wilson	3	"
Morgans	"	Mrs. Gorell	6	Bellaire.
Pelkeys	"	I. Pelkey	4	"
Davis & Archer	"	Davis & Archer	4	"
Cummings	"	J. Musgrove	3	"
Scahill	"	Chas. Rosser	3	"
Keyser	"	"	3	"
Bohill	"	John Bohill	6	"
Belmont No. 1	"	Belmont Coal Co.	7	"
Seabright	"	S. Seabright	4	Martins Ferry.
Hellings	"	Helling Bros	3	"
Sedgwick	"	C. Sedgwick	2	"
Heldts	"	G. Heldt	3	"
Hepburn	Slope	Wm. Hepburn	4	Morning View.
Klee	Drift	John E. Klee	2	Klee.
Davey	"	Davey Bros	6	Baileys Mills.
Green	"	J. Owens	2	Powhatan.
Schnegg	Shaft	J. Schnegg	2	"
Fielding	Slope	S. Fielding	3	"
Duvall	"	G. Duvall	3	"
Reline	Drift	J. Reline	5	St. Clairsville.
Renker	"	Renker Bros	3	"
Applegarth	"	Donely & Hood	2	Don P. O.
Diehl	"	Henry Diehl	3	"

COSHOCTON COUNTY.

WADE NO. 1.

Is situated on the W. & L. E. R. R., near Coshocton, Ohio, and is owned and operated by the Wade Coal Co., Cleveland, Ohio. James Perkins, Coshocton, Ohio, is superintendent and mine boss. It is a drift opening into the No. 6 seam of coal, which varies in thickness from two to four feet at this point. It is worked on the double entry plan, and is ventilated by a furnace. Twelve miners and four day men are employed here. One visit was made and found to be nearly exhausted, as all the men were drawing pillars.

WADE NO. 2

Is located near the Wade No. 1 mine, and is owned and operated by the same company. It penetrates the same vein of coal, worked on the

same plan, and ventilated by a furnace. It employs twenty-five miners and seven day men. One visit was made, and the conditions fair.

MORGAN RUN

Is located on the W. & L. E. R. R., about five miles from Coshocton, Ohio, and is owned and operated by the Morgan Run Coal Co., Cleveland, Ohio. S. B. Piper, Coshocton, Ohio, is superintendent, and Robert McCormick, of the same place is mine boss. It is a drift opening to the No. 6 vein of coal which is here from two and one-half to three and one-half feet in thickness. It is conducted on the double entry plan, and is ventilated by means of a furnace. One hundred and twenty-five miners and twenty-seven day men find employment. One visit was made during the year, and the mine found in fair order. Electric haulage of the Jeffrey type is in use at this mine.

DRAKE

Is situated on the W. & L. E. R. R., at Coshocton, Ohio, and is owned and operated by the Coshocton Coal Co. Chas. Cassingham, Coshocton, Ohio, is superintendent, and James Fitch, of the same place is mine boss. This is a drift opening, penetrating the No. 6 seam of coal, which varies in thickness at this point from two to three feet. It is worked on the single entry system, and is ventilated by a furnace. One visit was made and the mine was found in fair condition. Twenty-five miners and six day hands are employed.

GUERNSEY COUNTY.

WALHOUNDING

Is located on the C. & M. R. R., near Pleasant City, Ohio, and is owned and operated by the Wills Creek Coal Co., Detroit, Michigan. W. H. Davis, Byesville, Ohio, is superintendent, and William Sheehan, Pleasant City, is mine boss. This is a shaft opening 110 feet in depth into the No. 7 vein of coal which is five feet high at this place. The double entry system is used with fan ventilation. Two hundred and fifty miners and seventy day men are employed. Five fatal accidents occurred at this mine from January 5th to April 18th, and after a careful and searching investigation, it was found that no person was to blame for the accidents, as the mining laws were generally observed in the mine at all times. Rope haulage is used and electric machines of the Jeffrey type are used to cut the coal. Eight visits were made during the year.

CENTRAL

Is situated on the C. & M. R. R., near Byesville, Ohio, and is owned and operated by the same company as the Walhounding mine. W. H. Davis,

Byesville, Ohio, is superintendent, and James Orr is mine boss. This is a shaft opening eighty-five feet deep penetrating the No. 7 vein of coal to a depth of five feet. It is worked on the double entry system and ventilated by means of a fan. One hundred miners and thirty day men are employed. One visit was made, and the mine was found in good order. Rope haulage is in use, and the coal is cut by electric machines of the Jeffrey and Morgan-Gardner type.

CISCO

Is located on the C. & M. R. R., at Pleasant City, and is owned and operated by the Opperman Coal Co., Cambridge, Ohio. Thomas E. Richards, Pleasant City, Ohio, is superintendent, and Sam Coulter, Pleasant City, is mine boss. It is a shaft opening ninety-five feet in depth which penetrates the No. 7 vein of coal to a depth of five feet. The double entry system is used, and fan ventilation. One hundred and twenty-five miners and thirty-three day men are employed. Three visits were made and the mine found in fair order. Electric machines of the Morgan-Gardner type are used to cut the coal.

IMPERIAL

Is situated on the C. & M. R. R., at Derwent, Ohio, and is owned and operated by the Hamilton Mining Co., Cambridge, Ohio. W. P. Devore, Cambridge, Ohio, is superintendent, and John Harper, Derwent, Ohio, is mine boss. It is a shaft opening 115 feet in depth into the No. 7 seam of coal, which at this point is from six to six and one-half feet thick. The double entry system is used, and fan ventilation. Ninety miners and twenty-three day men find employment here. Two visits were made during the year, and the mine found in fair order. On March 12th C. C. Robins, who was employed as a driver, was killed by a slab of coal falling upon him from the face of a room, a full report of which was forwarded to the office at that time. Electric machines of the Morgan-Gardner type are used for cutting the coal.

PIONEER

Is located on the C. & M. R. R., near Byesville, Ohio, and is owned and operated by the Pioneer Coal Co., Cleveland, Ohio. W. H. Davis, Byesville, Ohio, is superintendent, and George Shaw, of the same place is mine boss. This is a slope opening 150 feet long into the No. 7 seam of coal which is five and one-half feet thick at this place. The double entry system is used with fan ventilation. Sixty-three miners and sixteen day hands are employed here. One visit was made and found that the mine would soon be exhausted, as all the men were engaged in the drawing of pillars.

NICHOLSON

Is situated on the C. & M. R. R., two miles south of Cambridge, and is owned and operated by the Ohio Coal Co., Cambridge, Ohio. A. J. Warner, Marietta, Ohio, is superintendent, and D. E. Evans, Cambridge, Ohio, is mine boss. It is a drift opening into the No. 7 seam of coal which is from four and one-half to six feet in thickness at this point. It is conducted on the double entry plan and has furnace ventilation. Thirty miners and seven day men are employed. One visit was made and the conditions are fair. Rope haulage and electric machines of the Morgan-Gardner type are used to cut the coal.

TRAIL RUN

Is located on the C. & M. R. R., near Robins P. O., and is owned and operated by J. W. Ellsworth & Co., Cleveland, Ohio. W. H. Davis, Byesville, Ohio, is superintendent, and John Sigman, Robins, Ohio, is mine boss. This is a shaft opening eighty feet deep into the No. 7 vein of coal which is five feet thick at this point. It is worked on the double entry system, and is ventilated by means of a fan. One hundred miners and thirty-five day men are employed here. Two visits were made during the year and the mine found in fair condition. Rope haulage and electric machines of the General Electric Co. type are used for cutting the coal. On November 24th I was called to investigate the fatal accident resulting in the death of John Geingera, miner, who was working in his room when a piece of slate fell killing him instantly. No blame could be attached to any one.

HARTFORD

Is situated on the Eastern Ohio R. R., at Hartford, Ohio, and is owned and operated by J. W. Ellsworth Co., Cleveland, Ohio. W. H. Davis, Byesville, Ohio, is superintendent, and David Williams, Buffalo, Ohio, is mine boss. This is a shaft opening ninety feet in depth into the No. 7 seam of coal and is from five to seven feet in thickness at this point. It is worked on the double entry plan, and has fan ventilation. One hundred and sixty-five miners and forty day men are employed. On my first visit I found the ventilation was deficient, and notified the management that unless the necessary improvements were made the force of men would have to be reduced. General Electric mining machines are used for cutting the coal.

GUERNSEY

Is located on the B. & O. R. R., two miles east of Cambridge, Ohio, and is owned and operated by the Cambridge Coal Co. J. E. Kistle, Cambridge, Ohio, is superintendent, and Charles Starr, of the same

place is mine boss. This opening is a drift into the No. 7 vein of coal which is five feet thick at this place. The double entry system, and furnace ventilation are in use. Twenty-three miners and six day men find employment in this mine. One visit was made and the mine found suspended.

C. C. C.

Is situated near the Guernsey mine, and is owned and operated by the same parties. It is also a drift opening penetrating the same seam of coal, and is of the same thickness. It is worked on the double entry plan, and is ventilated by a fan. Thirty miners and six day hands are employed. One visit was made and the mine found suspended, due to repairs that were being made to the tippie. Rope haulage and electric machines of the Jeffrey type are used to cut the coal.

KINGS

Is located on the B. & O. R. R., near Campbells Station, Ohio, and is owned and operated by Morris & Guild Coal Co., Cleveland, Ohio. W. A. Woodworth, Guilds, Ohio, is superintendent, and W. A. Williams, of the same place, is mine boss. This opening is a shaft 110 feet deep into the No. 7 vein of coal which at this point is five and one-half feet in thickness. It is conducted on the double entry plan, and has fan ventilation. One hundred and twenty-five miners and forty-nine day men are employed during the year. Four visits were made during the year, and the general condition of the mine was fair. Electric haulage is in use, and electric machines of the Jeffrey and Morgan-Gardner types are used for cutting the coal. Two fatal accidents occurred at this mine during the year. On December 12th I investigated the cause of an explosion of powder, which resulted in the death of one miner, and severely burning two others. There were seven kegs of powder in the second car from the motor, and in passing in the parting they ignited and exploded, the cars becoming charged with electricity. On the 22nd of December Charles Atkinson died from the effects of the explosion. The cause of the accident was a new source of danger to me, and notices were immediately posted at all the mines to the effect that no more powder should be hauled on electric motor trips. On March 22nd, John Zenger, a miner, lost his life by a fall of coal at the face of his room. The accident was due to the fact that the necessary precautions had not been taken.

OLD ORCHARD

Is situated five miles west of Cambridge on the B. & O. R. R., and is owned and operated by Morris & Guild Coal Co., Cleveland, Ohio. W. A. Woodworth, Guild, Ohio, is superintendent, and Ed. Donnelly, Danford, Ohio, is mine boss. The shaft is an opening 65 feet deep into the No. 7

vein of coal which is five and one-half feet in thickness at this point. is conducted on the double entry plan, and has fan ventilation. Fifty miners and ten day hands are employed. One visit was made and the mine found in good condition. Electric machines of the Jeffrey Morgan-Gardner types are used for cutting the coal.

FORSYTHE

Is located on the B. & O. R. R., five miles west of Cambridge, Ohio, is owned and operated by the Forsythe Coal Co., Danford, Ohio. E. Forsythe, Danford, Ohio, is superintendent, and Chas. Rabe, Danford, Ohio, is mine boss. It is a slope opening 150 feet in depth into the No. 7 vein of coal, which is five feet in thickness at this point. It is worked on the double entry system, and has fan ventilation. Sixty miners and eighteen day men find employment. One visit was made and the mine found in fair condition. Electric machines of the Morgan-Gardner type are used to cut the coal.

KLONDIKE

Is situated on the B. & O. R. R., six miles west of Cambridge, Ohio, is owned and operated by Loomis & Moss Coal Co., Kipling, Ohio. Henry Kipling is superintendent, and Wm. Rigby is mine boss. It is a slope opening 150 feet in depth to the No. 7 vein of coal which is five and one-half feet high at this point. The double entry system is in use, with fan ventilation. Seventy miners and twenty day men find employment. One visit was made and the mine found in fair condition. Rope haulage and electric machines of the Morgan-Gardner type are used in cutting the coal.

MINES EMPLOYING LESS THAN TEN MEN.

HARRISON COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Tipton	Drift	E. Tipton	3	Hattonia.
Croskey	"	W. B. Croskey	3	Cadiz.
Weyandt	"	A. Weyandt	3	Bowerstown.
Evans	Shaft	A. J. Evans	2-5	Freeport.

JEFFERSON COUNTY.

WALNUT HILL

Is located at Yorkville, on the C. & P. R. R., and is owned and operated by the Ohio & Pittsburg Coal Co., Cleveland, Ohio. John Nixon, Yorkville, Ohio, is superintendent, and Jas. McLain, of the same place, is mine boss. This opening is a drift into the No. 8 seam of coal and is five feet high at this point. It is worked on the double entry system, and is ventilated by means of a fan. Ninety miners and twenty-four day men find employment. Four visits were made during the year, and conditions were generally very bad both in regard to ventilation and drainage, and when instructions were given to remedy these defects, they were disregarded, but at the close of the year matters were slightly improved. Electric machines of the Morgan-Gardner type are used for cutting the coal.

DILLON

Is situated on the W. & L. E. R. R., at Dillonvale, Ohio, and is owned and operated by the W. & L. E. Coal Co., Cleveland, Ohio. Geo. Hornickel, Dillonvale, is superintendent, and Fred Aspenwall, is mine boss. This is a drift opening worked on the double entry system, and has fan ventilation. Three hundred and sixty miners and seventy-six day men are employed. Four visits were made, and with the exception of a few entries where the ventilation was impaired by the presence of a squeeze, the mine was in fair condition. Two electric motors are used, and electric machines of the Jeffrey type are used in cutting the coal. On June 15th, a fatal accident occurred which resulted in the death of J. Riviniaskaske, a miner, who attempted to get into an empty mine car when the trip was in motion, was investigated. He was squeezed between the car and rib, and was wholly to blame for the accident.

LONG RUN

Is situated on the W. & L. E. R. R. at Long Run, Ohio, and is owned and operated by the same company as the Dillon mine. Geo. Hornickel is superintendent, and J. A. McConaughy, Startle, Ohio, is mine boss. This is a drift opening worked on the double entry system and has fan ventilation. Four hundred miners and seventy day men find employment here. Two visits were made and with the exception of the ventilation being poor, caused by the fans being situated too far from the working face the mine was in fair order. Electric haulage is used, and machines of the Jeffrey type are used in cutting the coal. The mining laws have been generally observed during the year.

CONNER NO. 1

Is located on the W. & L. E. R. R., and is owned by the same parties as the Long Run mine, the same superintendent having charge, with Fred Baxter, Connersville, Ohio, as mine boss. It is a drift opening into the No. 8 seam of coal which is about five feet high at this place. The double entry system is in use with fan ventilation. Twelve miners and five day men are employed. One visit was made during the year, and the mine found in fair condition. Electric machines of the Jeffrey type are used for cutting the coal.

CONNER NO. 2

Is situated at the same place, and is owned and operated by the same company as the No. 1 mine. It is also under the same management and is worked and ventilated on the same plan as the No. 1 mine. Ten miners and five day men are employed. One visit was made and although this is a new mine, the main entry was in a terrible condition with mud and water having fallen to the height of five or six feet above the coal, and no apparent effort had been made to either prevent it from falling or to make it safe afterwards. However, the management agreed to abandon it as soon as possible, and make a new opening. Machines of the Jeffrey type are used in cutting the coal.

KELLEY NO. 2

Is located on the C. & P. R. R., at Warrenton, Ohio, and is owned and operated by the Kelley Coal Co., Portland, Ohio. E. J. Lewis, Portland, Ohio, is superintendent, and Joseph Robinson, of the same place, is mine boss. It is a drift opening into the No. 8 seam of coal which is about five feet in thickness at this place. It is conducted on the double entry system and is ventilated by a fan. Forty-five miners and thirteen day men find employment. Two visits were made to this mine during the year, and conditions were fair. Electric haulage and electric machines of the Morgan Gardner type are used for cutting the coal.

McFAYEN

Is situated on the main line of the P., C., C. & St. L. R. R., and is owned and operated by the McFayen Coal Co., Carmen, Ohio. J. C. Allen, is superintendent, and John Moon is mine boss. This is a drift opening into the No. 8 seam of coal which is four and one-half feet thick at this point. It is worked on the double entry system, and is ventilated by means of a fan. Sixty miners and sixteen day men are employed. One visit was made and the mine found in very poor condition, as the tracks in the main entry were covered to the depth of several inches with mud and water. New men had taken charge of the mine, however, who were laying a pipe line and timbering the main entry, and making the needed improvements.

HIGH SHAFT

Is located at Steubenville, Ohio, and is owned and operated by the Steubenville Coal and Mining Co., Steubenville, Ohio. Wm. Smurthwaite, of the same place, is superintendent, and Geo. Arthur is mine boss. This is a shaft opening 245 feet in depth into the No. 7 seam of coal which is about three and one-half feet thick at this point. It is conducted on the room and pillar system, and has fan ventilation. Twenty-two miners and twenty-two day hands are employed. One visit was made during the year, and the mine found in good order. Electric haulage and machines of the Jeffrey type are used to cut the coal.

DIAMOND NO. 2

Is located near Hammondsville, Ohio, on the main line of the C. & P. R. R., and is owned and managed by W. E. Smith, Wellsville, Ohio. Henry Welch, Hammondsville, Ohio, is superintendent and mine boss. The opening is a drift to the No. 7 seam of coal which varies in thickness from five to six feet. It worked on the double entry plan, with natural ventilation. Nine miners and two day men find employment. One visit was made during the year, and all of the men were within 150 feet of the pit mouth drawing pillars, and the mine will soon be abandoned.

DIAMOND NO. 3

Is situated across the creek from the No. 2 mine, and is owned and managed by the same parties. It is a drift opening to the No. 7 seam of coal which is four feet thick at this point. The double entry system is in use with natural ventilation. Eight miners and three day men are employed. This is a new mine, and was only visited once when preparations were being made to erect a furnace. Only entries are being driven as yet.

GREAT WESTERN

Is located at Toronto on the C. & P. R. R., and is owned and managed by the American Manufacturing Co., Toronto, Ohio. W. B. Francey, Toronto, is superintendent, and James Duke is mine boss. This is a drift opening into the Rogers vein of coal and is from two and one-half to three feet thick at this place. The single entry system is used, with furnace ventilation. Twenty-seven miners and two day men are employed. One visit was made during the year, and the mine found in good order.

FOREST CITY

Is located at the same place as the Great Western mine, and is owned and managed by the same company. John Ferguson, Toronto, Ohio, is mine boss. This is a drift opening into the Rogers seam of coal which is three feet thick at this point. The double entry system is used and

it is ventilated by a furnace. Twelve miners and five day men are employed here. One visit was made and the mine found in fair order, but they were advised to get a fan as soon as possible.

LA BELLE SHAFT

Is situated in Steubenville, Ohio, and is owned and operated by the La Belle Iron Co., Steubenville, Ohio. W. H. Ewing of the same place is superintendent and mine boss. The opening is a shaft 280 feet deep. One visit was made and found the men pumping out water preparatory to resuming work, as the mine has been suspended for a number of years.

BRILLIANT

Is located at Brilliant, Ohio, on the C. & P. R. R., and is owned and managed by J. A. Laughlin, Wheeling, W. Va. J. C. Cram, Brilliant, Ohio, is superintendent and mine boss. It is a shaft opening 260 feet deep. One visit was made during the year, at the request of the mining department, the management desiring to locate their boilers according to the mining laws of the state. It is the intention when the water has been pumped out to equip the mine with all modern machinery.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Altamont	Drift	O. P. Clifton.....	5	Steubenville.
Hills	"	R. S. Hill.....	3	"
Wilsons	"	Wm. Wilson	3	"
Ohio Valley	"	American Mfg. Co.....	8	Toronto.
Nicholson	"	John Nicholson	2	Dillonvale.

CLAY MINES OF JEFFERSON COUNTY.

FOREST CITY

Is situated at Toronto, Ohio, on the C. & P. R. R., and is owned and operated by the American Clay Manufacturing Co., Toronto, Ohio. W. B. Francy, Toronto, Ohio, is superintendent, and James Milne, Toronto, Ohio, is mine boss. It is a slope opening 200 feet deep into a vein of clay which is from ten to twelve feet thick at this point. Room and pillar system is in use, and the mine is ventilated by means of a fan. Twelve miners and six day men are employed. One visit was made and the mine found in fair condition.

GREAT WESTERN

Is located at the same place as the Forest City mine and is owned and managed by the same parties. Dan Hinkle is mine boss. It is a shaft opening fifty feet deep into the clay vein which at this point is from ten to twelve feet thick. Room and pillar system is in use with fan ventilation. Twelve miners and six day men are employed. One visit was made and the mine found in good order.

LITTLE GIANT

Is located at the same place as the Great Western mine and is owned by the same company. Jas. Coyne is mine boss. It is a shaft opening into the clay vein which is from ten to twelve feet deep. It is worked on the same system as the Great Western and ventilated by the same means. Six miners and five day men are employed. One visit was made, and the mine found in fair order.

OHIO VALLEY

Is situated at Toronto, Ohio, and is owned and managed by the same company as the above mine. J. Taggart is mine boss. It is a shaft opening 40 feet deep into the clay vein which is from 10 to 12 feet thick at this point. It is ventilated by a fan and employs eight miners and one day man. One visit was made and the mine found in fair condition.

MINES EMPLOYING LESS THAN TEN MEN.

MONROE COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Bruce	Shaft	J. W. Bruce.....	8	Aitch.
Dennis	"	B. S. Hastings.....	2	"
Morris	Drift	Wm. Morris	2	Woodsfield.
Cotts	"	Geo. Cotts.....	3	"
Baker	"	Geo. Baker	3	"
Carleton	"	S. R. Carleton.....	2	Jerusalem.
Steele	"	Wm. Steele	2	"

REPORT OF W. H. TURNER,

Inspector of the Fifth District from June 1, 1900, to November 15, 1900.

Hon E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR: — I herewith respectfully submit to you a report of the mines of the Fifth District from the date of my appointment on June 1st, 1900, to the close of the fiscal year November 15th, 1900. During the time embraced in this report all necessary improvements have been made. Managers evince a desire to obey General Order No. 1 which has secured a uniformity of conditions throughout the district, and giving a better understanding of the intent of the mining laws. In the machine mines where blasting is continuous throughout the working hours the air on the return entries is diffused with smoke which is detrimental to the persons employed in them. A better method could be instituted by airing the mine in sections with overcasts, and returning the fumes of each section separately to the outlets. With the electric power in the mine I believe it could be utilized in operating small fans in those overcasts which would overcome the excessive use of powder and prove untold blessings to the comfort of the workmen.

Two fatal accidents occurred in the district during the time covered by this report, one at each of the following mines: Trail Run and Kingston, a full account of which will be found in the report which follows.

Three new mines have been opened, viz., Ideal, Black Top and Little Kate. They are being equipped with electric machines and promise to rank with the best mines of the district.

I desire to extend to you my thanks for the many courtesies and valuable advice rendered in the discharge of my duties.

Respectfully submitted,

W. H. TURNER,

Inspector of Fifth District.

Cambridge, Ohio, November 15, 1900.

COSHOCTON COUNTY.

FRANKLIN WEST SIDE

Is located near Franklin Station, on the P., C., C. & St. L. R. R., and is owned and operated by the Columbus Mining Co., Columbus, Ohio. F. N. Barnes, Franklin Station, is superintendent, and J. S. Kitchen of the same place is mine boss. It is a drift opening which penetrates the No. 6 seam of coal which varies in thickness from three to four feet. It is worked on the single entry system, and is ventilated by a furnace. Fifteen miners and two day hands are employed. Three visits were made during the year. The workings were occasionally breaking into an adjacent abandoned mine, and during the night considerable black damp would escape from the old works, making it unpleasant for the workmen on entering the mine in the morning. As a remedy I requested the furnace fired at least one hour before the men entered the mine, and some obstructions removed from the air course. When I returned I found that my previous requests had been complied with, but the furnace stack was impaired, and a portion of it had fallen into the shaft. I requested that it be rebuilt, and the obstruction removed from back of the furnace. All suggestions had been complied with on my last visit, and the mine in good condition for one that is nearing exhaustion. George Hall had purchased the mine, and the force had been reduced to four men who were engaged in drawing entry stumps under the supervision of Mr. Hall.

FRANKLIN EAST SIDE

Is situated opposite the West Side mine, and is owned and operated by the same company. The same tippie is used in handling the coal from both mines. F. N. Barnes is superintendent, and J. S. Kitchen is mine boss. It is a drift opening penetrating the No. 6 seam of coal which is about four feet thick at this point. It is conducted on both the single and double entry systems, a furnace being used as a ventilating power. The coal is removed by mule power. Fifty-five miners and eleven day hands are employed. Three visits were made to this mine. I requested that checks be placed on the entries on my first visit, and upon my return found that my previous requests had been complied with, and on this and the following visit I found the mine conforming to the mining laws.

HUDSON

Is situated near Coshocton, on the C., C. & S. R. R., and was formerly owned and operated by the Hudson Coal Co., but is now owned and managed by G. W. Cassingham, Coshocton, Ohio. The opening is a drift which penetrates the No. 6 seam of coal which is four

feet thick at this place. It is operated on the double entry system, and has furnace ventilation. On my first visit a new furnace had just been built, and the ventilation was excellent. I requested some timbering done in the main entrance, and upon my return considerable of it had been completed. I renewed my requests for a final completion of this improvement. Otherwise the mine was being operated in conformity to the law.

CASSINGHAM

Is located near Coshocton on the Cleveland, Canton & Southern R. R., and is owned by the Coshocton Coal Co., Coshocton, Ohio. C. L. Cassingham, Coshocton, Ohio, is superintendent, and Jas. McCormick of the same place is mine boss. This is a drift which penetrates the No. 6 vein of coal, which at this point is four feet thick. Sixty miners and nineteen day hands are employed. It is worked on the double entry system and a furnace is the ventilating power. Two visits were made during the year. On my first visit the rope haulage and the opening in which it was being operated were being abandoned on account of a heavy dip in that section of the mine, and the excessive accumulation of water. A new shaft was being sunk to be used for pumping purposes in the old mine with a view of obtaining control of the water. With the exception of some timbering which I requested done, in the main entrance the mine was being operated in compliance with the mining laws. Upon my return the shaft was completed, but owing to the carelessness in hanging doors eighteen men were working in unlawful places. I advised them to cease work until the improvements were made. The men affected returned home and the doors were erected on the afternoon of the same day.

CONESVILLE NOS. 2, 3 AND 4

Are situated near Conesville, on the P., C., C. & St. L. Railway and are owned and operated by David Davis, Conesville, Ohio. He is also superintendent of the three openings. James Murphy, Conesville, Ohio, is mine boss of the No. 2; Wm. Hall, mine boss of the Nos. 3 and 4. The coal produced from all three of the openings is dumped over the same tippie. These openings are drifts penetrating the No. 6 seam of coal, which is from three and one-half to four feet thick. The No. 2 is worked on the single and double entry system, and has furnace ventilation. Forty-eight miners and six day hands are employed. This mine is located in the second range of hills west of the tippie. The coal is hauled with a spike team of horses through the front hill for a distance of a half mile. Two visits were made to this during the year. The mine is not supplied with an escapement way other than the furnace shaft, but they are now driving for the purpose of intersecting an abandoned mine to secure a second opening. Otherwise the mine was being operated in

conformity to the mining laws. On my last visit the mine was found idle and no inspection was made. The No. 3 was visited twice. It is worked on the single entry system, and has furnace ventilation. Fifteen miners and three day hands are employed. The pillars are being drawn in view of abandonment. On my first visit I found the mine being operated in compliance with the mining laws as required at this stage of the work. On my next visit the mine was found idle and no inspection was made. No. 4 has worked through two ranges of hills, east from the tippie and the mining is all done under the third range of hills. The single entry system is in use with furnace ventilation. Seventy-five miners and eight day men are employed. Two visits were made to this mine, and with the exception of some impaired doors, which I requested repaired, the mine conformed to the law. A rope haulage is used in delivering the coal to the tippie. On my last visit the mine was idle and no inspection was made.

CONLEY NO. 2

Is located four miles west of Coshocton, on the Cleveland, Canton & Southern R. R., and was formerly owned by the Bowers Coal Co., but is now owned by H. D. Dennis, Cleveland, Ohio, who is also superintendent. Harry Clough, Coshocton, Ohio, is mine boss. These are drift openings with entries running parallel, penetrating the No. 6 seam of coal, which is about four feet in thickness. Two visits were made during the year. On my first visit the only work that was being done was repairs, and when visited the second time was found idle. It is worked on the single entry plan, the coal being run down an incline by gravitation, and the empty cars are pulled up with a stationary engine.

MORGAN RUN

Is situated three miles southeast of Coshocton, on the C., C. & S. R. R., and is owned and operated by the Morgan Run Coal Co. L. B. Piper, Coshocton, Ohio, is superintendent, and Robert McCormick, of the same place, is mine boss. It is a drift opening in to the No. 6 seam of coal which is four feet thick at this place. It is worked on the double entry system and is ventilated by a furnace. Sixty miners and nineteen day hands are employed. Three visits were made during the year. The ventilation was deficient on the furnace entry, and the surplus air circulating other portions of the mine. I suggested that a regulator be so constructed as to distribute more of the air through the deficient section, and also requested the passway timbered. Upon my return the timbering had been done, but the ventilation on the furnace entry was still unsatisfactory. An investigation proved that the intake to this section of the mine was partially closed in. I requested that the obstruction be removed, and the entry double shifted which was being driven to

intersect the furnace in order to secure a shorter route for the air to travel. One of the first motors built and introduced in the mines of the state is still in use and doing good work. Mathew T. Hamilton was injured in this mine on September 19, 1899, by a fall of slate, and was a help invalid until death relieved him on August 8, 1900.

DRAKE

Is situated near Coshocton, on the Cleveland, Canton & Southern R. and was formerly operated by the Coshocton Coal Co., but on April 1900, it was purchased by Thos. Williams & Son, Coshocton, Oh. John Williams, Coshocton, Ohio, is superintendent and John Brunskill the same place is mine boss. This opening is a drift which penetrates the No. 6 seam of coal, which is from three and one-half to four feet thick. It is conducted on the single entry plan, and has furnace ventilation. Sixteen miners and six day hands are employed here. Four visits were made during the year. It was found idle on my first visit, and subsequent visits which followed found it being operated in accordance with mining laws. It is being worked here in view of being abandoned. On November 2nd, George Kiser, a miner, was found dead in his room at 12:30 p. m. The customary investigation proved the room to be in a lawful condition.

WADE NOS. 1 AND 2

Are located three miles southeast of Coshocton on the C., C. & S. R. and are operated by the Wade Coal Co., Cleveland, Ohio. This is a drift opening into the No. 6 seam of coal which is four feet thick at this point. It is conducted on the single entry system, and is ventilated by means of a furnace. Four miners are employed in taking out entry stumps previous to abandonment. It was visited once and it was found to be operating in accordance with the mining laws for the number of persons employed. The No. 2 mine is located near the No. 1 mine, and is owned and operated by the same company. It was visited once when it was found idle, and no inspection was made. This mine has worked very little during the summer and autumn months. James Perkins, Coshocton, Ohio, is manager.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Name of Owner.	P. O. Address
Poland	Seth Poland	Isletta.
Culbertson	Davis & Bradford	"
Low Gap	Peter Heinrich	Necomerstown.

GUERNSEY COUNTY

GUERNSEY

on the B. & O. Railway, two miles east of Cambridge, and is the Northwestern Mining Co., Cambridge, Ohio. Jas. S. Conridge, Ohio, is superintendent, and A. J. Kistler, of the same mine boss. This is a drift opening into the No. 7 seam of coal, from five to six feet thick. It is worked on the double entry and ventilated by means of a fire basket. It employs thirty-seven and eight day hands. Two visits were made during the time covered by this report. On my first visit I ordered cap pieces for the miners to be used in posting, and thicker pillars left, as was threatened by a creep. On my second visit the mine was in, and has remained so up to the close of this report.

C. C. C.

two and one half miles east of Cambridge on the B. & O. is owned by the Ohio & Northwestern Coal Co. Jas. S. Conner is superintendent, and A. J. Kistler is mine boss. It is a drift opening into the No. 7 seam of coal and is from five to six feet thick at

Two visits were made during the year. Eight pick miners and day men find employment here. This mine has been idle for some time. An effort was being made to secure a haulway through the mine for the adjoining coal field. Upon my return visit it was found this idea had been abandoned, and work suspended.

FORSYTHE

at Danford on the B. & O. Railway, and is owned by the Forsythe Co., Danford, Ohio. C. P. Forsythe, Danford, is superintendent Benjamin Morris of the same place, is mine boss. This is a drift opening which penetrates the No. 7 seam of coal which varies from five to six feet. It is worked on the double entry and a fan is used as the ventilating power. Fifty-two miners and about twenty-three day hands are employed. Four visits were made during the year. Upon my first visit the ventilation was found wanting to impaired stoppings, and the irregular operation of the fan prompted a governor placed on the fan, and the stoppings repaired. On my second visit I found that my previous orders had been complied with, the mine conforming to the mining laws. On my third and fourth visits the scales were tested, and were found to be weighing inaccurately, owing to a brace coming in contact with the connecting rod. On the next test they were found to be discriminating forty pounds to the company in favor of the company. The friction was relieved at once, and accuracy resulted. On my following visit I found them weighing

correctly. Electric machines are successfully operated, and the coal is hauled to the bottom of the slope by mules, where it is hoisted and dumped by an engine.

IMPERIAL

Is located at Derwent on the C. & M. R. R., and is owned by the Hamilton Mining Co., Cambridge, Ohio. W. P. Devore, Cambridge, Ohio, is superintendent, and J. O. Harper, Derwent, Ohio, is mine boss. This is a shaft opening penetrating the No. 7 seam of coal, which is from five to six feet thick. It is worked on the double entry plan, and is ventilated by means of a fan. Seventy machine men and loaders are employed. Four visits were made during the year. On my first visit I found the ventilation in bad condition, caused by the partition between the downcast and the upcast being badly impaired. I ordered the necessary repairs which were made immediately, and my additional inspections have found the mine operating in accordance with the mining laws of the state. Electric mining machines are used in mining the coal, which is delivered to the bottom of the shaft by mules.

CENTRAL

Is situated at Byesville, on the C. & M. R. R., and is owned by the Will Creek Coal Co., Detroit, Mich. W. H. Davis, Byesville, Ohio, is general superintendent, and Jas. Orr, of the same address, is mine boss. This is a shaft opening penetrating the No. 7 seam of coal which is from five to six feet thick. It is worked on the double entry system, and is ventilated by a fan. One hundred and sixty-nine miners and machine men and forty-three day hands are employed. The coal is mined by electric machines, and is delivered from the gatherers to the bottom of the shaft with rope haulage. Two visits were made during the year. On my first visit I found the breakthrough law being violated by driving over the distance. I called the mine boss's attention to the law regulating breakthroughs and requested that it be recognized. Only one pair of entries were working in solid coal. The remainder of the work was drawing pillars preparatory to abandonment. On my second visit I found the mine in compliance with the mining law, and travelling homeward exceedingly fast.

NICHOLSON

Is located near Cambridge, on the C. & M. R. R., and is operated by the Ohio Coal Co., Cambridge, Ohio. David E. Evans, Cambridge, is sole manager. This is a drift opening which penetrates the No. 7 seam of coal and is from four to six feet thick at this place. Forty-two machine men and loaders and seventeen day hands are employed. Three visits were made during the year. The first call found the mine idle. On the second visit the ventilation was found to be deficient on the fifth and sixth entries, and the breakthrough law was being violated by driving

beyond the distance. I ordered the stoppings and doors repaired, and breakthroughs made every sixty feet, and also called the attention of the boss to the child labor law, as there were some children under age working in the mine. On my return my previous orders had been complied with, and the mine operating in accordance with the mining laws. The double entry system is in use with furnace ventilation.

TRAILRUN

Is situated at Trailrun, on the C. & M. R. R., and is owned by the Ellsworth Coal Co., Cleveland, Ohio. W. H. Davis, Byesville, Ohio, is superintendent, and D. M. Jones, Buffalo, Ohio, is mine boss. This opening is a shaft into the No. 7 seam of coal, and varies in thickness from five to six feet. It is conducted on the double entry plan, and has fan ventilation. One hundred and ten loaders and cutters and forty-five day men are employed. Four visits were made during the year. My first visit was to investigate a fatal accident which occurred on the railroad switch above the tippie. No inspection was made. On my second visit the ventilation was found in poor condition caused by the intake airway being badly obstructed by caveins, and the fan house being impaired. I requested the miners to remain at home until the mine could be placed in a safe condition. After four days' work on repairs the mine resumed operations. My return visit found the ventilation good. The manway had been made into an intake, and the fan house repaired, but the breakthroughs in rooms were irregular, and they were ordered to be made according to the law. On June 13th. John A. Sigman, mine boss, had both legs crushed while attempting to stop a train of six railroad cars which had gotten from under the control of the car trimmers, due to bad breaks, from which injuries he died on the following morning.

HARTFORD

Is located at Hartford, on a branch of the B. & O. R. R., and is operated by the Ellsworth Coal Co., Cleveland, Ohio. W. H. Davis, Byesville, Ohio, is general superintendent, and Wm. D. Williams, Buffalo, Ohio, is mine boss. David Williams is employed as assistant superintendent. It is a shaft opening penetrating the No. 7 seam of coal, which is from five and one-half to six and one-half feet thick at this place. It is operated on the double entry system, and is ventilated by means of a fan. One hundred and thirty-one loaders and cutters, and sixty-one day men are employed. Two visits were made during the year. The mining is done with electric machines, and is hauled by a motor. A violation of the breakthrough law was being practiced on my first visit, the management attributing the fault to the cutters. I stopped all such places until the breakthroughs were made. The required volume of air was circulating throughout the mine, but the large quantity of powder exploded daily

was the cause of a continuous fog which hung over the workmen on return entries, which can be remedied by sinking an air shaft at extreme workings of the mine.

OLD ORCHARD

Is located at Danford, on the B. & O. R. R., and is operated by Morris & Guild Coal Co., Cleveland, Ohio. E. L. Donnelly, Cambria, Ohio, is superintendent, and Alvey Alderman, Danford, Ohio, is boss. It is a shaft opening into the No. 7 seam of coal which varies in thickness from five and one-half to six and one-half feet. It is operated on the double entry system, and has fan ventilation. One hundred and fifteen loaders and cutters and thirty-six day men are employed. Four visits were made during the year. Electric machines are used in cutting the coal which is hauled by horses. On my first visit I found the law through law being violated by driving beyond the distance, and let a portion of the coal in some of them. I ordered them made lawful and kept clear of obstruction. Upon my second visit I found the law throughs in an improved condition, but not wholly perfect. I repeated my orders for a strict compliance to General Order No. 1, and requested that a cut be made around the shaft bottom. I tested the scales and found them weighing accurately.

KINGS

Is situated at Kingston, on the B. & O. Railway, and is owned by Morris & Guild Coal Co., Cleveland, Ohio. W. A. Woodworth, Cambria, Ohio, is superintendent, and Mathew Skyles, Guild, Ohio, is mine boss. This is a shaft opening into the No. 7 seam of coal and is from five to six feet thick at this point. It is worked on the double entry system and is ventilated by a fan. Electric machines and motor haulage are in use. Two hundred cutters and loaders, and seventy day men are employed. Four visits were made during the year. On my first visit I ordered man holes provided along the motor haulway, and break throughs made according to law. Upon my second visit three of scales were tested and found correct. My third visit was made for the purpose of investigating an accident which resulted in the death of Jas. P. McKinney, who was coming up on the cage in company with four other persons, bringing water for domestic purposes, when for some unknown cause he fell from the cage and was instantly killed. The accident occurred at 7 p. m., after working hours. The deceased was not employed in the mine, being employed as checkman on the railroad. On my fourth visit the man holes had not been provided, and they were given fifteen days in which to make the improvement and thus comply with an injunction, which was accepted and the man holes provided. I found seven places working ahead of the air on my last visit, and gave

management the second and last request to comply with the break-through law. Considerable water had collected in the down cast shaft and reduced the air volume noticeably, but arrangements were being made to have it pumped out.

POST BOY

Is located at Post Boy, and is owned by P. E. Gibson, Cambridge, Ohio. It is the drift opening into the No. 6 seam of coal which is three feet high at this point. The mine has been idle during the term of this report.

KLONDIKE

Is situated at Klondike, Ohio, on the B. & O. R. R., and is owned by the Loomis Moss Coal Co., Akron, Ohio. Jas. Moss, Kipling, Ohio, is superintendent and mine boss. This is a slope opening into the No. 7 seam of coal, and varies in thickness from five to six feet. It is conducted on the double and thribble entry system, and is ventilated by fan. The three main entries are driven parallel with each other, and all butt entries are double. Ninety cutters and loaders and twenty-three day hands are employed. Three visits were made during the year. On my first inspection the mine was found to be operated in compliance with the mining laws with the exception of the absence of checks on the entries. The scales were tested and found accurate. Checks were provided on my last visit, and conditions were satisfactory. I suggested that a man hole be made at the slope bottom for a retreat for the hitcher on in case a car should run back. Electric machines and rope haulage are in use.

BLACK TOP

Is located near Kingston, on the B. & O. R. R., and is owned and operated by the Monarch Coal Co., Akron, Ohio. Wm. Rigby, Kipling, Ohio, is superintendent and mine boss. This is a new shaft opening which penetrates the No. 7 seam of coal and is about five and one-half feet thick. The mine is well planned for ventilation and convenience. The air shaft is going down, and a fan will be provided when it is completed. The ventilation is now produced by exhaust steam. Twenty-five loaders and cutters are employed. Electric machines are now in use, and modern hoisting apparatus has been secured. This mine promises to rank with the best mines of the district. One visit was made.

LITTLE KATE

Is situated on the Cleveland & Marietta R. R., and is one and one-half miles southwest of Byesville, Ohio. It is owned and operated by the National Coal Co., Cleveland, Ohio. W. A. Lucas, Cambridge, Ohio, is superintendent and mine boss. It is a shaft opening into the No. 7 seam of coal which is six feet high on one side of the shaft and four feet on the other, which would indicate a fault, which it is hoped will be of a

local character. This mine was opened during the past summer, and promises to rank with the average mine when fully equipped. The second opening is a slope, and is being pushed to completion. Electric machines will be installed, as soon as the power can be provided. Good buildings are being constructed, and modern machinery selected.

IDEAL

Is located near Byesville, on the C. & M. R. R., and is owned by the Wills Creek Coal Co., Detroit, Mich. W. H. Davis, Byesville, Ohio is superintendent, and Geo. Shaw of the same address is mine boss. This opening is a shaft into the No. 7 seam of coal which is five feet and eight inches in thickness. A slope for the second opening has reached the coal. Sixteen day men are employed. Good power houses are being erected, and this promises to be a model mine when placed in operation.

CISCO

Is located near Pleasant City, on the C. & M. R. R., and is owned by the Opperman Coal Co., Cambridge, Ohio. Thos. Richards, Pleasant City, Ohio, is superintendent, and Samuel Coulter, of the same place, is mine boss. This is a shaft opening penetrating the No. 7 seam of coal which here varies from five and one-half to six and one-half feet in thickness. It is worked on the double entry plan, and has fan ventilation. One hundred and eighteen cutters and loaders and twenty-seven day men are employed here. A violation of the breakthrough law was discovered on my first visit, and the attention of the management was called to the same. Preparations were being made to place a motor in the mine. Upon my return visit the motor was being successfully operated. Electric machines are used for mining the coal. This combined with electric haulage makes a perfect equipment. The third opening has been made and provided with stairs for the ingress and egress of the miners, in order to prevent the miners coming in contact with the motor in the single stone entry. A heavier engine has been provided for the fan, and the mine is conducted in accordance with the mining laws.

PIONEER

Is situated at Byesville, on the Cleveland & Marietta Railway, and is owned and operated by the Pioneer Coal Co., Cleveland, Ohio. W. H. Davis, Byesville, Ohio, is superintendent, and Geo. Shaw, of the same address, is mine boss. It is a slope opening into the No. 7 seam of coal which is five and one-half feet thick. Fifty-seven pick miners and eleven day men are employed. Two visits were made and the mine found to be in compliance with the mining laws. It is nearing exhaustion and about eighty-five per cent. of the coal has been taken out.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Name of Owner or Operator	P. O. Address.
Briar Hill No. 1.....	D. W. Nicholson.....	Cambridge.
Old Orchard No. 1.....	Jones & Taylor.....	Craig.
Huff	James Huff	Kimbolton.
Forsythe	J. W. Larrison.....	"
Virginia	T. Eichelberger	Danford.

TUSCARAWAS COUNTY

TWIN CITY

Is located near Dennison on the P., C., C. & St. L. R. R., and is owned by the Dennison Coal Co., Dennison, Ohio. J. B. Ramage, Dennison, Ohio, is superintendent, and Wm. Todd, of the same address, is mine boss. This is a drift opening penetrating the No. 6 seam of coal which is here about four feet thick. It is worked on the double entry plan, and has furnace ventilation. Twenty-six miners and four day men are employed. Three visits were made during the year. On my first inspection I requested a furnace provided, and that a pump be placed in the mine. The drainage was bad, and the roads were muddy. I also recommended heavier pillars left. Creeps have been a continued annoyance to this mine since its first operation. Upon my return visit a good furnace was in operation, but the creep had closed the air course leading to the miners working on the upstraight entry. I ordered a break-through made from room No. 1 to the water course, and the single entry system put in operation by hanging doors on the adjoining rooms until a connection could be made beyond the creep for a return airway. I also requested a door hung between the first and second left entries, and one hung on the main entry. On my last visit all previous orders had been complied with, and a gasoline pump had been placed in the mine, and with the exception of muddy roads the mine was in good condition.

SOMERDALE NO. 1

Is situated at Somerdale on the W. & L. E. R. R., and is owned by the Somerdale Coal Co., Cleveland, Ohio. Frank McIntosh, New Philadelphia, Ohio, is superintendent, and A. Brown, Somerdale, Ohio, is mine boss. This is a drift opening piercing the No. 5 seam of coal which varies from three and one-half to four feet in thickness. It is worked on the double entry system, and is ventilated by a fan. Six miners and one day hand are employed. One visit was made, and the mine found to be operating in compliance with the law.

SOMERDALE NO. 2

Is located near the No. 1 mine and is owned and operated by the same company. Wm. Lewis, Somerdale, Ohio, is mine boss. It is a drift opening which penetrates the No. 5 seam of coal, and varies in thickness from three and one-half to four feet. It is conducted on the double entry system, and has furnace ventilation. Fifty miners and seven hands are employed. One visit was made. The boilers had recently been moved from the upcasts reducing a part of the radiating power. I requested that the furnace be kept fired heavier in order to overcome the deficiency. Otherwise the mine was in a lawful condition.

WAINWRIGHT NO. 4

Is situated at Wainwright, Ohio, on the C., L. & W. R. R., and is owned by the Midvale Goshen Coal Co., Massillon, Ohio. Frank McIntosh, New Philadelphia, is superintendent, and D. C. Morris, Wainwright, Ohio, is mine boss. This is a slope opening with a six percent incline which penetrates the No. 6 seam of coal, which at this point varies in thickness from four to five feet. It is worked on the double entry system and has furnace ventilation. One hundred and sixty-four miners and thirty-three day hands are employed. One inspection was made. I derided the breakthroughs, which were being neglected, made according to General Order No. 1, and a door hung between the seventh and eighth entries. These mines were in operation but very little of the time during the period covered by this report, otherwise the inspections would have been more numerous. The coal is removed by rope haulage.

WAINWRIGHT NO. 5

Is located near the No. 4 mine, and is owned and superintended by the same parties. George McIntosh, Wainwright, Ohio, is mine boss. One visit was made during the year and the mine found idle owing to an impaired boiler and no inspection was made. Forty-five miners and day men are employed.

MIDVALE NO. 2

Is situated at Barnhill on the C., L. & W. R. R., and is owned by the Midvale Coal Co., Cleveland, Ohio. Frank McIntosh, New Philadelphia, Ohio, is superintendent, and Wm. Moke, of the same address, is mine boss. It is a drift opening, penetrating the No. 6 seam of coal, which is four feet thick at this place. It is worked on the double entry system and has furnace ventilation. Two visits were made. A new air shaft had been sunk near the head of the workings, admitting fresh air directly to the men, the air returning through the main haulage, and at times more or less black damp was visible in the return, which is opened through a creep, there being no way to close it off. I advised that the furnace be fired regularly whether the mine was in operation or not, and kept

drawn out. With this one exception the mine was working in compliance with the law. One hundred miners and twenty-two day hands are employed.

GOSHEN

Is located near Beidler, on the C., L. & W. R. R., and is owned by the Goshen Coal Co., Cleveland, Ohio. C. J. Brockenshire, New Philadelphia, Ohio, is superintendent, and John Dougal, of the same place, is mine boss. This is a slope opening, which penetrates the No. 6 seam of coal which varies in thickness from three and one-half to four feet. This mine is conducted on the double entry plan, and is ventilated by means of a furnace. Two inspections were made. On my first visit the breakthrough law was being violated. One hundred and fifteen miners, and twenty-four day hands were employed, and the air was deficient at the intake for the number of men employed. The return was enlarged, and obstructions removed from the air course. Upon my return visit I found the ventilation in conformity to the mining law. Rope haulage is in use at this mine.

EAST GOSHEN NO. 1

Is located at Klondike, Ohio, on a branch of the Cleveland & Pittsburgh R. R., and is owned by the East Goshen Coal Co., New Philadelphia, Ohio. C. J. Brockenshire, of the same place, is superintendent, and S. J. Miles is mine boss. It is a drift opening penetrating the No. 6 vein of coal and is about four feet thick at this place. It is worked on the double entry system, and has furnace ventilation. Two visits were made. A general violation of the breakthrough law prevailed, and stone was stored in some of the principal airways, and the volume of air at the intake was deficient. I ordered the breakthroughs made regularly, and kept clear of refuse. On my return I found the air well distributed, but the volume still deficient. The situation was reported to the superintendent, and he agreed to proceed at once to sink a shaft near the head of the mine, which is almost completed at this writing. A rope haulage is in use at this mine.

EAST GOSHEN NO. 2

Is situated near the No. 1 mine, and is owned and operated by the same company. Wm. Empfield, New Philadelphia, Ohio, is assistant superintendent, and John Burt, of the same address, is mine boss. This is a slope opening which penetrates the No. 6 seam of coal, which is four feet thick at this point. It is worked on the double entry system, and is ventilated by a fan. The endless chain is used in delivering the coal from the slope bottoms, which surpasses all other slope haulage for convenience, economy and general security. Two visits were made during the year, and the mine found in good condition. On my last visit heavy rails were being laid for the purpose of placing a motor haulage in

the mine. One hundred and six miners and twenty-seven day hands employed. This is a new mine, and when fully equipped promises to compare with the best mines in this district.

SWAN

Is situated at Sandyville, on the Valley Railway, and is owned by the Swan Coal Co., Canton, Ohio. J. H. Meiser, Sandyville, Ohio, is manager. It is a drift opening penetrating the No. 5 seam of coal which varies in thickness from three to four feet. Eighteen miners and day hands are employed. It is worked on the double entry system and a furnace is used for temporary ventilation. Bad drainage was found in the test entry. The mine boss assured me that if the test proved favorable, good drainage would be made. I suggested that a good furnace be provided for future necessities. This is a very expensive little mine, the coal being hauled to the brow of the hill and lowered with a drum at the foot of the hill where it is hauled with a spike team of horses a distance of one-half mile to the railroad.

SUGAR CREEK

Is located near Shanesville, Ohio, on the C., C. & S. R. R. It is owned and operated by the Shanesville Coal Co., Cleveland, Ohio. D. R. Thomas, Shanesville, is sole manager. This is a drift opening which penetrates the No. 6 seam of coal, which at this point is one and one-half feet thick. It is worked on both the single and double entry plan, and ventilation is obtained with furnace power. Forty miners and thirteen day hands are employed. But one inspection has been made. A new furnace has just been completed, and the ventilation is good, but no second opening other than the furnace shaft had been provided. Orders were left for an additional shaft to be sunk as soon as the necessary arrangements could be made. Rope haulage is used in this mine.

NEW CASTLE

Is located two miles east of New Philadelphia, Ohio, on the Ohio and Pennsylvania Railroad, and is owned by the New Castle Coal Co., New Philadelphia, Ohio. Jas. Kollar, New Philadelphia, Ohio, is superintendent, and Jas. C. Kollar, of the same address, is mine boss. This is a drift opening penetrating the No. 6 seam of coal, which is four feet thick at this point. It is worked on the double entry system, and is ventilated by a furnace. Twenty-two miners and four day hands are employed. But one inspection was made. The breakthrough law was being violated, and no escape way was provided. A new drift was being driven for the escape way. I ordered it completed as speedily as possible, and the breakthroughs made to conform to the law.

MAPLE GROVE

Is a domestic mine located near Uhrichsville, Ohio, and is owned by Schindler Bros., Tuscarawas, Ohio. H. A. Schindler is superintendent, and G. E. Schindler is mine boss. This is a drift opening penetrating the No. 6 seam of coal, worked on the double entry plan, and ventilated by a furnace. Thirteen miners and one day hand are employed. One inspection was made, and the general condition of the mine was good, with the exception of an entry which was being driven to intersect the Buckeye mine and passed beyond the air limit. I ordered the remainder driven through from the Buckeye mine.

HOUK

Is located at Stillwater, on the C., L. & W. R. R., and is owned by the American Sheet Steel Co., Canal Dover, Ohio. J. L. Houk, Stillwater, Ohio, is superintendent, and Daniel O'Connor of the same address, is mine boss. This is a drift opening penetrating the No. 7 seam of coal, which is here five feet thick. It is worked on the double entry plan, and is ventilated by a furnace. Forty-seven miners and twelve day men are employed. One visit was made and the mine found idle, and it has only worked a few days during the period of this report.

DENNISON

Is located at Dennison, Ohio, and is owned by the American Sheet Steel Co., Dennison, Ohio. Elmer Cline, Dennison, Ohio, is superintendent, and August Viegler, of the same place, is mine boss. It was visited once during the year, and found idle, but in good condition. The boss was keeping in readiness to resume operations at a moment's notice. This mine supplies the Dennison Rolling Mill, and but little work has been done during the entire summer.

NEWPORT

Is located at Newport, Ohio, on the C., L. & W. R. R., and is owned by the Erhard Coal Co., Cleveland, Ohio. Frank Kohl, Massillon, Ohio, is superintendent, and Emrys Price, New Philadelphia, Ohio, is mine boss. It is a drift opening into the No. 6 seam of coal, which is here three and one-half feet thick. It is conducted on the double entry system, and is ventilated by a furnace. Twenty miners and nine day hands are employed. One visit was made, and the mine found strictly in compliance with the mining law.

BUCKHORN

Is located two miles north of Newcomerstown, Ohio, on the C. & M. R. R., and is owned and operated by the Buckhorn Coal Co., Newcomerstown, Ohio. Wm. Neil, Newcomerstown, Ohio, has the entire supervision. The opening is a drift into the No. 6 vein of coal, and varies

in thickness from three and one-half to four feet. It is worked on the single entry system, and has furnace ventilation. Seven miners and three day men are employed here. On June 19th, this mine was visited and the extremity of the mine found to be flooded with water. The miners were working on the high side of the mine near the entrance and a shaft was being sunk for a pump discharge, in view of removing the water from the flooded portion of the mine. The scales were tested and found correct.

MASSILON PEACOCK

Is located near Mineral City, on the Valley R. R., and is owned by E. Van Kirk, Mineral City, Ohio. John Punccheon, Mineral City, is sole manager. This is a drift which penetrates the No. 5 seam of coal which is here from three to four feet thick. The double entry system is worked with furnace ventilation. Sixty miners and nineteen day hands are employed here. It was visited on June 21st and found to be in compliance with the mining laws.

HUFF'S RUN

Is situated in Mineral City on the Valley R. R., and is owned by Ridge way Burton Coal Co., Massillon, Ohio. J. J. Klien, Mineral City, Ohio is superintendent and mine boss. This is a drift opening which pierces the No. 5 strata of coal which varies in thickness from three to four feet. It is worked on the double entry plan and has furnace ventilation. Sixty five miners and thirty day hands are employed. Two visits were made during the year. On my first visit a number of minor children were employed in the mine, attention was called to all concerned to the "Child Labor Law," and the children were all sent home. With this exception the mine was found in compliance with the law. On my second visit the ventilation was found deficient, and an investigation proved that brattice between this and the old south side of the mine had been opened and the furnace was receiving considerable air that was of no benefit to the ventilation of the mine. Economy and convenience would justify the sinking of a new air shaft and a furnace provided. The present furnace is located in the old works several hundred yards from the present workings, and the return is more or less obstructed by falls and water. A long distance of T iron railroad is rusting out in the mud and water, and only used to supply the furnace with fuel. Rope haulage is in use in this mine.

ROCK CUT

Is situated near Mineral City, on the Valley R. R., and is owned by G. Markley, Mineral City, Ohio. E. J. Jones, of the same address, is manager. The slope pierces the No. 5 seam of coal which varies from three and one-half to four feet in thickness. It is worked on the double entry system, and has furnace ventilation. Fourteen miners and eight day men

find employment here. Two visits were made. This is an old mine and is virtually worked out. The present owners are working pillars, and odd blocks of coal left by the preceding company. On my first visit the ventilation was deficient, caused by an obstructed air course, and poor stoppings. Directions were given for the necessary improvements, and upon my return visit my previous orders had been complied with, and conditions lawful for the small force of men employed. A pump was being placed in the mine in order to secure better control of the water.

ACME

Is located near Mineral City on the Valley R. R., and is owned by G. J. Markley, Mineral City, Ohio. G. F. Brick, Mineral City, Ohio, is mine boss. This is a drift opening which penetrates the No. 6 seam of coal which varies in thickness from three to four feet. The double entry system is worked with furnace ventilation. Fifteen miners and five day men are employed. Two visits were made, and on both occasions the mine was found in compliance with the mining law.

TUNNEL NO. 5

Is situated near mineral City, on the Cleveland & Pittsburg R. R., and is owned by the Tunnel Coal Co., Mineral City, Ohio. D. S. Sowers, Cleveland, Ohio, is superintendent, and John Brick, Mineral City, Ohio, is mine boss. This is a slope opening into the No. 5 seam of coal which is from three to five feet thick at this point. It is conducted on the double entry plan, and is ventilated by a furnace. Ten miners and one day hand are employed. One visit was made. This is an old mine, and is nearly exhausted. Orders were given to remove a brattice to allow the air to travel a much shorter circuit from the inlet to the furnace. This change was made which remedied the deficiency in the ventilation.

TUNNEL NO. 6

Is located near the No. 5 and is owned and operated by the same company. It is a drift opening into the No. 6 seam of coal which is here four feet thick. The main entries are worked double, while the butt entries are worked on the single entry system, and a furnace is used as a ventilating power. Eighteen miners and seven day men are employed. One visit was made. Owing to open stoppings the ventilation was impaired at the working faces. I requested a general overhauling, and tightening up of stoppings, and was informed later that the improvements had been made.

SOUTH SIDE

Is located near Mineral City, on the Valley R. R., and is owned by C. E. Holden, Mineral City, Ohio. Thos. Osborn, Mineral City, Ohio, has the entire supervision. This is a drift opening into the No. 5 seam of

coal which is here from three to four feet in thickness. Five miners and five day hands find employment here. It is conducted on the double entry plan, and has furnace ventilation. Two visits were made during the year. On my first visit the mine was idle. Upon my second visit the mine had resumed operations with a small force of men. I suggest that the furnace be cleaned out and the stack repaired to guard against a deficiency in the ventilation in case the force should be increased.

INDIAN HILL

Is situated near Uhrichsville, Ohio, on the P., C. C. & St. L. R. R., and is owned by the Seneca Coal Co., Fostoria, Ohio. W. W. Steve Uhrichsville, Ohio, is superintendent, and J. W. Shank, New Philadelphia, Ohio, is mine boss. This is a drift opening into the No. 6 seam of coal which varies in thickness from three and one-half to five feet. It is worked on the double entry system, and is ventilated by furnace. Forty-five miners and thirteen day hands are employed at the mine. On my first visit I advised the sinking of a new air shaft, and a fan then in the possession of the company, placed in operation. The men were then at work in the mine, and no surplus air could be produced with the small furnace, and the 24-inch tiling shaft. On my return the number of men employed had been increased to fifty-two, and with the increase of air. I again appealed to the manager to sink a new shaft, as the force would necessarily have to be reduced. He expressed his willingness to reduce the force, but would not consent to sink the shaft, consequently the reduction was made with the approval of the men.

EAGLE HILL NEW MINE

Is located near Zoar Station, Ohio, on the Cleveland & Pittsburgh Railroad and is owned and operated by the Eagle Hill Coal Co., Zoar Station, Ohio. E. Jones, of the same place, is manager. It is a drift opening penetrating the No. 6 seam of coal and is about four feet thick at this place. The double entry system is in use, with furnace ventilation. It employs twenty miners and one day hand. It was visited on July 17th and found in good condition. The scales were tested and found correct.

EAGLE HILL OLD MINE

Is situated near the old mine and is managed by the same parties. It is worked on the double entry system, and is also ventilated by means of a furnace. It was examined on July 17th, and found in conformity to law. Some complaint was offered about the furnace being banked early in the afternoon, and I requested it kept well fired until closing time. Fourteen miners and eight day men are employed.

ROYAL CLAY

Is located at Midvale on the C., L. & W. R. R., and is owned by the Royal Sewer Pipe Co., Akron, Ohio. Frank Cotter, Canal Dover, Ohio, is superintendent, and Harvey Studer, New Philadelphia, is mine boss. Twenty-three miners and two day hands are employed. It is worked on the double entry plan, and has fan ventilation. One visit was made, and the mine was found in lawful condition.

SKEELS

Is a domestic mine, located near Dennison, Ohio, and is owned by Winfield Skeels, Dennison, Ohio, who is sole manager. It is a drift opening penetrating the No. 6 seam of coal which at this point is about three feet deep. It is worked on the double entry system, and is ventilated by a furnace. One visit was made during the year, and the mine found in good condition. I requested that the mine be mapped as the excavation was sufficient to warrant it.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Name of Owner or Operator.	P. O. Address.
South Side Clay	C. E. Holden	Mineral City.
Mazurie	American Mnfr. Co.	Akron.
Minich	R. Minnich	Tuscarawas.
Royal Coal	Royal Sewer Pipe Co.	Akron.
Diamond Coal	American Mnfg. Co.	Pittsburg.
Diamond Clay	"	"
Uhrichsville Coal	"	"
Buckeye Clay	Buckeye Fire Clay Co.	Uhrichsville.
Uhrichsville Clay	American Mnfg. Co.	Pittsburg.
Paul Clay	Paul Clay Company	Massillon.

NOBLE COUNTY.

GLENWOOD

Is located at Glenwood on the Cleveland and Marietta Railroad, and is owned by the Eastern Ohio Coal Co., Cleveland, Ohio. R. T. Price, Cleveland, Ohio, is superintendent, and G. W. Robson, Glenwood, Ohio, is bank boss. It is a shaft opening into the No. 7 seam of coal which at this point is about five feet thick. A number of faults have been encountered at this point. It is worked on the double entry system, and has fan ventilation. Sixty loaders and cutters, and twenty day hands are employed. On my first visit I found the men riding on a cage minus

one safety catch. On further investigation I found the stairway be showered with water, and unfit for travel. I ordered the water to be collected and piped to the bottom and the manway retimbered. On my return visit a portion of my previous orders had been provided, some timbering effected, but the stairway remained wet. I requested that the manway be made dry, and the electric wire raised to the top across the manway, and four minor children removed from the mine. On my last visit conditions were improved, but a motor had been placed in the mine, making a portion of the haulway too narrow for person travel. I requested manholes provided according to law.

REPORT OF WILLIAM K. MOORE,

Inspector of the Sixth District from November 15, 1899, to July 1, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio.

DEAR SIR:—I have the honor of submitting to you the annual report of the mines located in the Sixth District composed of the counties of Stark, Wayne and Tuscarawas, beginning November 15th, 1899, and ending July 1st, 1900, up to the time when Mr. William Miller succeeded me as Inspector and assumed the responsibilities of the office.

Five fatal accidents occurred during the time embraced in this report. On January 17th, in the Wainwright mine No. 4, Tuscarawas county, Albert Stover was accidentally injured while riding on a trip of loaded cars, and died from the injuries received on the 25th. At the Eureka mine located in Stark county, Conrad Hore, was instantly killed by a large fall of rock while working at the face of his room on the morning of February 6. On February 13th, in the East Goshen mine No. 1, Tuscarawas county, Wm. Brown met his death by a large fall of rock while working at the face of his room, there being a slip in the top which caused it to fall. At a small mine known as the Patrick mine in Tuscarawas county, on February 16, Frederick Cramer, while cutting under, was killed by a large fall of coal. Also at the Woodland mine, Stark county, on May 14, John McGinnis while working off a standing shot liberated a rock weighing about three hundred pounds, which struck him on the head killing him instantly.

During the time embraced in this report there have been fifteen permanent improvements made which are as follows: Two furnaces built, one fan erected, six air shafts sunk, three second openings made and three stairways built. I was called upon to test twenty-five sets of scales, sixteen of which were located in Stark county, and nine sets in Tuscarawas county, and in each case found them weighing correctly. During my connection with the Mining Department I have discovered that no part of the Inspectors duties gives as little satisfaction as the testing of scales. It is the opinion of a great many miners that the operators are continually trying to take advantage of them especially in the weighing of coal, no matter in what manner you test them or how many persons are present when the test is made, check weighman or no check weighman, it is the opinion of a great many miners that the scales can be changed in a moment in such a way as to rob them of any amount of coal desired in spite of the check weighman or any one else, and the scales at the same time apparently weighing correctly, and as long as this feeling exists the testing of scales will never be satis-

factory. It is my opinion that in order to give satisfaction to operators and miners, the Inspector should have at least one to standard weights instead of two or three hundred which is the an generally carried.

In concluding my official labors it is with pleasure that I r the friendly feeling shown me by the operators and miners of my trict during my connection with the Department, and your kind sonal consideration will ever remain a pleasant memory.

Respectfully submitted,

WM. K. MOORE,

Inspector of Sixth Distr

North Lawrence, Ohio, July 1, 1900.

TUSCARAWAS COUNTY.

GOSHEN NO. 2

Is situated near the village of Beidler, on the C. L. & W. Railroad, and is owned by the Goshen Coal Co. Jos. Breckenshire is superintendent, and John Dougal is mine boss. It is a drift opening into the No. 6 seam of coal, worked on the double entry system, and is ventilated by a furnace. One hundred miners and twenty-five day hands are employed. This mine was always found in a very good condition.

EAST GOSHEN NO. 1

Is located five and one-half miles east of New Philadelphia on a branch of the C. & P. Railway, and is owned by the East Goshen Coal Co. Jos. Breckenshire is superintendent, and Samuel J. Miles is mine boss. This is a drift opening into the No. 6 seam of coal and worked on the double entry system, a furnace being used as a ventilating power. One hundred and seventy-five miners and 33 day hands find employment. The condition of the mine is very good. The scales were tested and found accurate. Two visits were made up to the time the District was changed.

MASSILLON PEACOCK

Is located at Mineral Point on the Valley Railway and is owned by E. Van Kirk. John Puncheon is superintendent and mine boss. On my last visit fifty-seven miners and fourteen day men were employed in removing the No. 5 seam of coal which is worked on the double entry system. Three visits were made, and on each visit the ventilation was found to be very good, and the mine was being worked in a workmanlike manner.

STILLWATER, OR HOOK

Is situated on the C. L. & W. Railroad, in the village of Stillwater, and is owned by the American Sheet Steel Co. John E. Price is superintendent and mine boss. This is a drift opening into the No. 7 seam of coal which is here about five and one-half feet in thickness. It is worked on the double entry system, and employs fifty-five miners and eleven day hands. The building of a new furnace and a second opening are the permanent improvements for the year.

NEWPORT

Is located on the C. L. & W. Railroad, and is owned by the Erhard Coal Co. E. Price is superintendent and mine boss. Twenty miners and nine day hands are employed in removing the No. 6 seam of coal which is worked on the double entry system, a furnace being used as a ventilating power. The conditions of this mine have always been fair. Two visits were made. The scales were also tested and found correct.

TWIN CITY

Is situated near the city of Dennison on the P. C. C. & St. L. Railroad, and is owned by the Dennison Coal Co. J. B. Rammage is superintendent, and Joshua Howell is mine boss. This is a drift opening into the No. 6 seam of coal. Thirty miners and fourteen day hands are employed. Upon my last visit to this mine I found the ventilation very poor owing to the single entry system, and canvas doors being in use making it very unsatisfactory. Upon going out at the second opening which was being used as one of the inlets I found that it had caved in. This was ordered cleaned up at once and a door placed on the mouth of the drift to prevent the inlets from working one against the other which was the case. The scales were also tested and found correct.

ROLLING MILL

Is located at Dennison, Ohio, and is owned by the Dennison Rolling Mill Co. Wm. Erwin is superintendent and August Veigel is mine boss. Fourteen miners and four day hands find employment here in removing the No. 6 seam of coal which is worked on the single entry system which makes the ventilation very satisfactory. On my last visit I ordered a new furnace and a trapper placed at the main door.

WAINWRIGHT NO. 4

Is located on the C. L. & W. Railroad, in the village of Wainwright, and is owned by the Midvale Goshen Coal Co. Frank McIntosh is superintendent, and D. C. Morris is mine boss. One hundred and thirty miners and forty day hands are employed in removing the No. 6 seam of coal which is worked on the double entry system. A new air shaft and furnace are the improvements for the year, making the ventilation very good. Three visits were made.

WAINWRIGHT NO. 5

Is situated near the No. 4 mine and is operated and managed by the same parties. Ten miners and three day men are employed. This is also a drift opening into the No. 6 seam of coal, worked on the double entry system, and ventilated by means of a fan.

SOMERDALE NO. 2

Is located at Somerdale on the W. & L. E. Railroad, and is owned by the Somerdale Coal Co. Frank McIntosh is superintendent and Wm. Lewis is mine boss. This is a drift opening into the No. 5 seam of coal, worked on the double entry system and ventilated by a furnace. Sixty miners and eighteen day men were employed. On my last visit to this mine the ventilation was very poor, the furnace being located in a very poor place. The doors were in a bad state of condition. The breakthroughs were

found leaking, and the inlets were working one against the other. The general condition of this mine has been very unsatisfactory to the Department.

SOMERDALE NO. 1

Is situated near the No. 2 mine on the same railway, and is owned and operated by the same parties. It penetrates the same seam of coal, and is worked on the double entry system. Six miners and two day men were employed on my last visit.

SHANESVILLE

Is located near the village of Sugar Creek on the W. & L. E. R. R., and is owned by the Shanesville Coal Co. D. R. Thomas is superintendent and mine boss. It is a drift opening into the No. 4 seam of coal, worked on the double entry system, and on my last visit fifty-five miners and fifteen day hands were employed. The scales were also tested and found accurate. The ventilation of this mine has been very poor owing to the size of the furnace and the poor attention the fire has been given. I requested that the furnace be enlarged, and a better fire kept which would place the ventilation of the mine in a fair condition.

HUFF'S RUN

Is situated at Mineral City, Ohio, on the Valley Railway, and is owned by the Ridgeway Burton & Co. J. J. Klien is superintendent and mine boss. This is a drift opening into the No. 5 seam of coal worked on the double entry system, and a furnace is used as a ventilating power. Sixty miners and twenty-one day hands were employed. On my last visit it was discovered that there was a little black damp coming from the old workings which I ordered walled back. Also requested the stack at the furnace lengthened. Three visits were made in which the scales were tested and found accurate.

ACME

Is located on the Valley R. R., near Mineral City, Ohio, and is owned by the Ohio Coal Co. Geo. Brick is superintendent and mine boss. It is an opening into the No. 6 seam of coal worked on the double entry system. Twenty miners and six day hands are employed. A furnace is used as a means of ventilation and conditions are very good.

MIDVALE NO. 2

Is situated on the C., L. & W. R. R., in the village of Barnhill, and is owned by the Midvale Goshen Coal Co. Frank McIntosh is superintendent and W. L. Moke is mine boss. One hundred and seventy-five miners and thirty day hands find employment. It is a shaft penetrating the No. 6 seam of coal worked on the double entry system. They have just put down a new air shaft which makes this one of the best ventilated mines in the district.

TUSCARAWAS

Is located on the P., C., C. & St. L. R. R., in Warwick township, owned by the Indian Coal and Clay Co. Thomas Robinson is superintendent and mine boss. Forty-one miners and eleven day hands are employed, removing the No. 6 seam of coal. One visit was made to the mine and the miners were out on a strike for their pay.

MOREY RIDGE

Is situated on the Ohio canal near the village of Beidler, Ohio. Nungesser is the owner, and Gottlieb Affolder is superintendent and mine boss. Eleven miners and three day hands are employed. This is a drift opening into the No. 6 seam of coal and is worked on the double entry system. A new air shaft and a second opening are the improvements for the year.

SWAN

Is located on the Valley Railway, near the village of Sandyville, owned by the Swan Coal Co. J. H. Meiser is superintendent and mine boss. This is a drift opening into the No. 5 seam of coal, and is worked on the single entry system. Fifteen miners and three day hands are employed. This mine has been very unsatisfactory to the department.

ROCK CUT

Is situated on the Valley Railway near the Rock Cut and is owned by Geo. Markley. E. L. Jones is superintendent and mine boss. Ten miners and six day men are employed in removing the No. 5 seam of coal. It is worked on the double entry system and a furnace is used as a source of ventilation. A new air shaft with a new stack and a second set of ladders provided places the mine in fair condition.

SOUTH SIDE

Is located on the Valley Railway at Mineral City, Ohio, and is owned by C. E. Holden. Thos. Osborne is superintendent and mine boss. This is a drift opening into the No. 5 seam of coal, worked on the double entry system, and employs eight miners and three day hands. Two visits were made and upon each visit the mine was found idle. A furnace is used as a ventilating power.

EAST GOSHEN NO. 2

Is situated one mile east of the East Goshen No. 1 mine and is owned and operated by the same parties. It is a drift opening into the No. 5 seam of coal, worked on the double entry system, and employs one hundred miners and twenty day hands. W. N. Empfield is superintendent and Wm. Hanson mine boss. Upon my last visit to this mine the vein

was poor owing to the use of canvas doors which were ordered taken out at once. Also requested that the firing at noon be stopped. The scales were tested and found correct. A fan is used as a mode of ventilation.

STARK COUNTY.

MINGLEWOOD NO. 2

Is situated in the village of North Lawrence on the Pittsburg, Ft. Wayne & Chicago R. R., and the W. & L. E. R. R. and is owned and operated by James Mullins, Wooster, Ohio. Wm. Baumgardner is superintendent and mine boss. This is a shaft opening into the Massillon seam of coal which is here four feet in thickness, and is worked on the double entry system. Twenty miners and six day men are employed. Two visits were made since which time the mine has been suspended until the trade improves.

MINGLEWOOD NO. 3

Is located in Tuscarawas township on the same railroads as the No. 2 mine, and is owned and operated by the same parties. Wm. Baumgardner is superintendent and Wm. Moffit is mine boss. This is a shaft opening 208 feet deep into the No. 1 seam of coal. One hundred and sixty miners and thirty day hands are employed. This mine is worked on the double entry system, and a fan is used as the ventilating power. The conditions of this mine are fair. The scales were also tested and found in good working order.

MINGLEWOOD NO. 4

Is also located in Tuscarawas township near the No. 3 mine, and on the same railway, and is under the same management as the Nos. 2. and 3 mines. Wm. Baumgardner is superintendent and John Ryan is mine boss. One hundred miners and twenty-three day hands are employed in removing the Massillon seam of coal which is very disturbed at this point. The pillars of the No. 1 and the old slope are also being taken out at this opening, making it a difficult mine to manage. Two fans are used in ventilating the mine. The conditions of the mine are fair.

Minglewood Slope and Shaft No. 1 have been abandoned.

CLOVER HILL NO. 2

Is situated in Lawrence township, one mile east of the No. 1 mine, which has been abandoned, on the C., A. & C. R. R., and is owned by the Fox Lake Coal Co. John Featherstone is superintendent. This is a new shaft opening 47 feet deep into the No. 1 seam of coal, which is here about five feet in thickness. Nine miners and eight day men are employed in opening up this new mine, the outlook of which is very promising.

ANNUAL REPORT

ELM RUN NO. 3

ed on the W. & L. E. and C., L. & W. Railways, near the village of East G., and is owned by the Elm Run Coal Co. Wm. Penman is superintendent and mine boss. It is a shaft opening 150 feet deep into the No. 1 or Massillon seam of coal, worked on the double entry system and ventilated by means of a fan. Twenty-five miners and nineteen day men find employment. They are now employed in drawing some pillars and driving a rock entry to another basin of coal. On my last visit the scales were tested and found correct. The ventilation was very good.

The Nutwood mine owned and operated by the same company has been abandoned.

WARWICK NO. 1

Is situated in Tuscarawas township, near the village of East G., on the W. & L. E. R. R., and is owned by the Warwick Coal Co. Swier is superintendent, and E. C. Swier is mine boss. It is a shaft opening into the No. 1 or Massillon seam of coal, worked on the double entry system. Ninety-eight miners and twenty-three day men find employment here. A fan is used as a mode of ventilation. Conditions are good. Scales were tested and found accurate.

WARWICK NO. 2

Is a new shaft opening into the Massillon seam of coal which is four and one-half feet in thickness worked on the double entry system. Twenty miners and ten day men were employed on my last visit. The mine is situated one mile east of the No. 1 mine, located on the W. & L. E. R. R., and is owned and operated by the same parties as the No. 1 mine. Two visits were made and each time found the mine in very good condition.

CENTRAL

Is situated in Tuscarawas township near the old Upper G. on the W. & L. E. R. R., and is owned by the Central Coal Co. Sonhalter is superintendent, and Robert Moore is mine boss. It is a shaft 260 feet deep to the Massillon seam of coal, worked on the double entry system. Five feet in thickness, worked on the double entry system. Twenty-five miners and twelve day hands were employed. A fan is used as a mode of ventilation. The scales were tested and found correct.

STANWOOD

Is located in the village of Stanwood on the C., L. & W. R. R., owned by E. G. Krause & Co., Cleveland, Ohio. It is a shaft opening into the Massillon seam of coal which is six feet thick.

conducted on the double entry system and a fan is used as a mode of ventilation. Seventy miners and fourteen day men are employed. On my last visit the scales were tested and found correct.

WEST MASSILLON NO. 3

Is located near the village of North Lawrence, Ohio, on the Pittsburg, Ft. Wayne & Chicago Railway, and is owned and operated by E. G. Krause & Co. C. R. Klien is superintendent and mine boss. The opening is a shaft forty feet deep to the Massillon seam of coal, worked on the double entry system, a fan being used as a ventilating power. On my last visit forty miners and fifteen day men were engaged in drawing the pillars, and they expect to finish this fall.

WEST BROOKFIELD NO. 2

Is located near the No. 1 mine on the W. & L. E. R. R., and is owned by the Massillon Mining Co. R. W. Johns is superintendent and J. E. English is mine boss. This is a new shaft opening to the Massillon seam of coal, and on my last visit fifteen day hands were employed in opening up this mine.

West Brookfield No. 1 has been abandoned.

POCOCK OR YOUNGS SHAFT

Is located in the village of East Greenville on the W. & L. E. R. R. and is owned by the Pocock Coal Co. C. A. Kouth is superintendent and mine boss. This is a shaft 248 feet deep opening into the No. 1 or Massillon seam of coal. It is worked on the double entry system, and a fan is used as a ventilating power. One hundred and twenty-five miners and twenty-two day hands are employed here. Two visits were made during the year. The scales were tested and found correct. The general condition of this mine is fair.

NEW GREENVILLE

Is located in the village of East Greenville on the W. & L. E. R. R. and is owned by the Howells Mining Co. Wm. James is superintendent and Mathew English is mine boss. It is a shaft opening into the Massillon seam of coal, worked on the double entry plan, and ventilated with a fan. Ninety miners and twenty-seven day hands were employed. Two visits were made during the year, and on each visit the mine was found in a very good condition. The scales were also tested and found in good working order.

DRAKE

Is located near Newman on a branch of the P., Ft. & C. R. R., and is owned by the Drake Coal Co. F. J. Kellar is superintendent and mine boss. It is a shaft opening 165 feet deep, and 115 miners and 36 day

hands were employed on my last visit, since which time the mine has been suspended until such time as the coal trade is improved. The mine will then be finished in a few months.

EUREKA

Is situated in Lawrence township on the C., L. & W. and the Pittsburgh, Ft. Wayne & Chicago Railways, and is owned by the Massillon-Cleveland Coal Co. Lewis Brenkamp is superintendent and mine boss. The opening is a shaft into the No. 1 or Massillon seam of coal, worked on the double entry system, and employs forty-five miners and fifteen day hands. A new shaft and fan are the improvements for the year.

MASSILLON STANDARD

Is a small mine located on the Ohio Canal near the village of Navarre and is owned by Fred Hess, Massillon, Ohio. Geo. Ray is superintendent and mine boss. Twelve miners and three day hands find employment here. It is worked on the double entry system, and steam exhaust is used as a ventilating power. One visit was made, at which time I found them still drilling search holes for the old Beaver Run Slope mine which is full of water.

NORTH MASSILLON NO. 2

Is a shaft opening into the Massillon coal at a depth of 150 feet, situated on the C., L. & W. and a branch of the Pittsburgh, Ft. Wayne & Chicago Railroads, and is owned by Ridgeway, Burton & Co. John Hodgkins is superintendent and mine boss. One hundred miners and twenty-three day hands are employed. This mine is worked on the double entry system and is ventilated by means of a fan. New ropes and safety catches are the improvements for the year.

MASSILLON STONE AND FIRE BRICK CO

Is a clay mine situated in Lawrence township on the Pittsburgh, Ft. Wayne & Chicago Railway, and is owned by the Massillon Stone and Fire Brick Co. W. G. Hipp is the superintendent and Geo. Hanns is the mine boss. It is worked on the double entry system and a furnace is the ventilating power. Two visits were made during the year. The condition of this mine is very good. Twelve miners and six day hands find employment.

HERNBROOK

Is a shaft opening 150 feet in depth to the No. 1 or Massillon seam of coal situated on the C., L. & W. R. R. and Pittsburgh, Ft. Wayne & Chicago Railway, and is owned by the Ridgeway, Burton & Co., Wm. Crookston is superintendent and mine boss. This mine is worked on the double entry system, and has fan ventilation. Fifty miners and fifteen day hands were employed on my last visit in drawing the pillars with the expectation of finishing this winter.

WOODLAND

Is located near the village of East Greenville on the C., L. & W. R. R., and is owned by the Massillon-Cleveland Coal Co. D. R. Jones is superintendent and mine boss. This is a shaft opening 250 feet deep into the Massillon or No. 1 seam of coal, and is worked on the double entry system. Fifty miners and fifteen day hands were employed. Two visits were made, and the scales tested and found correct.

ELM RUN NO. 4

Is located near the No. 3 mine and is owned and operated by the same parties. Wm. Penman is superintendent and Edward Penman is mine boss. This is a shaft opening into the Massillon seam of coal and is worked on the double entry system with exhaust steam as a ventilating power. Sixty-two miners and sixteen day hands find employment here. A new air shaft and an escapement way are the improvements for the year. The scales were also tested and found correct.

WAYNE COUNTY

WAYNE SLOPE NO. 1

Is located on the New York, Pittsburg & Ohio R. R., one mile north of Doylestown, Ohio, and is owned by the Wayne Coal Co. O. V. Dibble is superintendent and Cyrus Evans is mine boss. This is a slope opening into the Massillon seam of coal. Fifteen miners and five day hands were employed in removing the pillars on my last visit, since which time this mine has been abandoned.

WAYNE SLOPE NO. 2

Is located near the No. 1 mine on the same railway and is owned and operated by the same company. This is a new opening into the Massillon seam of coal, which is here about three and one-half feet in thickness. One visit was made to this mine during the time they were engaged in sinking the slope. It was discovered that they were using a hemp rope for drawing up the slope, and upon examining same it was found in an unsafe condition, and a new one was ordered at once, which was complied with.

REPORT OF JAMES P. DAVIS,

From November 15, 1899, to November 15, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR: — From November 15, 1899, to April 30, 1900, the M Department of the state was under the management of Chief Insp R. M. Haseltine, at which time he was succeeded by Hon. E. G. Biddison. During the first half of the year the counties of Carroll, Harrison and the southern portion of Columbiana were embraced in the fifth district. About June 1, 1900, the state was re-districted, at which time the counties of Carroll, Columbiana, Portage, Mahoning and Tipton, and the mines at Bergholtz and Irondale, located in Jefferson county, and the Thompson Run mines, situated in Tuscarawas county, were formed in what is now known as the sixth district.

During the period the oil fields at Scio, Cadiz and Bowerstown, which are located in Harrison county, were in my district the greater portion of my time was taken up in the sealing of oil wells, which prevented from giving the mines in the district the attention they should have had. The coal trade during the year which has just closed has been good throughout the district, with but few exceptions, have worked steadily. As a natural result this always brings general satisfaction between employers and employees.

While a large percent of the mines in the district were always kept in good condition, I occasionally found one in a state of disorder, due to various causes which follow the mining industry. Notwithstanding this has been my highest aim in the discharge of my duties to preserve the safety of the workmen entrusted to my care, three fatal accidents occurred during the year, one in Jefferson county, and two in Columbiana, a full account of which will be found in the report that follows in their order.

It is with pleasure that I can report the harmonious relations existing between the operators and miners of the district and myself during the year which has just closed. Thanking them for their kind and courteous treatment, and cheerfully acknowledging my obligations to you for your able and generous counsel, and the many manifestations of good will played, I remain

Yours very respectfully,

JAS. P. DAVIS,
Inspector Sixth District

Dell Roy, Ohio, November 15th, 1900.

. CARROLL COUNTY.

ELDER

Is located two miles east of Dell Roy, on the Cleveland Division of the W. & L. E. Railroad, and is owned by J. D. Owens, Canton, Ohio. D. F. Owens, Dell Roy, Ohio, is superintendent and bank boss. This is a drift opening to the No. 7 seam of coal which at this point is five feet in thickness, worked on the double entry system, with furnace ventilation. From ten to twelve miners and three day hands found employment. This mine was visited four times during the year. The solid coal in this mine has been exhausted, and only a few men were employed at the close of the year.

SCOTTS

Is situated three miles east of Dell Roy on the Cleveland Division of the W. & L. E. Railroad, and is owned by the Mardy Coal Co., East Liverpool, Ohio. John Reese, Dell Roy, Ohio, is superintendent and mine boss. This opening is a drift to the No. 7 seam of coal which is from four to six feet in thickness at this point. It is worked on the double entry system, and is almost exhausted, only three men being employed at the mine during the year.

DAVIS NO. 3

Is located on a branch of the W. & L. E. Railroad, one mile east of Sherrods-ville and is owned by H. S. Odbert, Cleveland, Ohio. C. W. Wag-ner, Sherrods-ville, Ohio, is superintendent, and R. M. Jones of the same place is the mine boss. This is a drift opening to the No. 7 seam of coal which is four feet in thickness, and is worked on the double entry system with furnace ventilation. From forty to fifty miners and 12 day hands find employment here during the first part of the year. This mine received three visits during the year. The coal is hauled by the use of an endless rope. The mine was worked out and abandoned on August 31, 1900.

DAVIS NO. 6

This is a new opening just opposite the No. 3 mine into the No. 7 seam of coal, which is here four feet in thickness, and is owned by the same company. About fifty miners and ten day hands were employed at the close of the year. This mine was visited four times during the year and found in good condition. Rope haulage is used to convey the coal to the tippie.

STARKEY

Is situated one mile west of Minerva on the Tuscarawas branch of the C. & P. Railroad, and is owned by John Starkey, Minerva, Ohio. He is also superintendent and mine boss. The opening is a slope to the No. 6 seam of coal which is here 2 feet and 8 inches in thickness, worked on

the single entry system, with furnace ventilation. From eight to ten miners and four day men are employed during the first part of the year. This mine was visited on February 21, and found in fair condition, but has been idle since March 1st.

HUSTON.

This is a domestic mine located one-half mile west of Carrollton, and owned by Huston & Fawcett, Carrollton, Ohio. F. P. Moody, Carrollton, Ohio, is superintendent and mine boss. This is a drift opening into the No. 7 seam of coal and is worked on the double entry system, and has furnace ventilation. The entire output of this mine is consumed by the Granite Brick Works. Ten miners and two day hands are employed here.

LINDEN NO. 1

Is located on a branch of the Valley Railroad, three miles east of Mineral City, and is owned by the Davis Railway Coal Co., Canton, Ohio. W. I. Davis, located at Canton, Ohio, is the general manager. J. J. Evans, Lindentree, Ohio, is the superintendent, and H. E. Cameron, Lindentree, Ohio, is the mine boss. This is a drift opening into the No. 5 seam of coal which varies in thickness from two to four feet.

The double entry system is in use, and is ventilated by means of furnace. Forty-five miners and twelve day hands are employed. visited this mine three times during the year and found it in fair condition.

LINDEN NO. 6

Is located at Lindentree, and is under the same management as the No. 1 mine. It is located on a branch of the Valley Railroad. This is a drift opening into the No. 6 seam of coal and is about three feet and four inches in thickness. It is worked on the double entry system, and has furnace ventilation. The coal is mined by electric power, the Jeffrey mining machines being used to cut the coal which is conveyed to the chutes by rope haulage. About sixty miners, and fifteen day hands find employment. This mine was visited three times during the year and found in fair condition.

MAGNOLIA

Is situated one mile south of Magnolia on a branch of the Valley Railroad, and is owned by the Magnolia Coal Co., Magnolia, Ohio. J. Jordan is superintendent, and J. S. Davis is mine boss. This is a shaft mine 66 feet in depth to the No. 5 seam of coal which is about four feet in thickness. It is worked on the double entry system, and is ventilated by a fan. Eighty miners and twenty day hands find employment here.

BEATTY NO. 1

Is situated on a branch of the C. & P. Railroad, one mile southwest of Magnolia, and is owned by the Beatty Fire Clay Co., Magnolia, Ohio. C. C. Whitacre, Magnolia, Ohio, is superintendent, and Charles Darrah, is mine boss. The opening is a drift into the No. 5 seam of coal and is worked on the double entry system with furnace ventilation. The solid coal in this mine has been exhausted. From six to ten miners are employed.

BEATTY NO. 2

This mine is situated at Magnolia, Ohio, and is owned by the Beatty Fire Clay Co., and is under the same management as the No. 1 mine. It is a drift opening into the No. 6 seam of coal and is worked on the double entry system, and is ventilated by means of a furnace. From eighteen to twenty miners and four day hands find steady employment.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Ebersole	Drift	J. E. Ebersole.....	3	Carrollton.
Pearch	"	C. Pearch	2	Sherrods-ville.
Sharp	"	S. Sharp	3	"
Richardson	"	A. Richardson	2	"
Preston	"	H. E. Preston.....	3	Leesville.
Ball	"	H. Ball	2	"
Penglaze	"	Wm. Penglaze	1	Dell Roy.
Close	"	Peter Close	2	"
Guy	"	Guy & Marshall.....	2	"

CLAY MINES IN CARROLL COUNTY.

MALVERN NO. 1

Is located at Malvern, Ohio, and is owned by the Malvern Fire Clay Co. Chas. Deckman is general manager, and George Davis, is mine foreman. This is a drift opening and ventilated by means of a fan. This mine furnishes steady employment for about 12 miners.

CLAY MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Minerva	Drift	Minerva Fire Clay Co.	7	Minerva.
Sandy Valley	"	Canton & Malvern F. C. Co.	6	Magnolia.
Beatty	"	Beatty Fire Clay Co.	2	"

COLUMBIANA COUNTY

NEW SHAFT

Is situated on the main line of the C. & P. Railroad, at Salineville, John Morris, Salineville, Ohio, is superintendent and Samuel Morris, mine foreman. It is a shaft opening to the No. 7 seam of coal at this point varies in thickness from five to six feet. The coal is of excellent quality. It is worked on the double entry system, and is ventilated by means of a fan. The coal is mined by the Morgan-Gardner & Jeffrey electric machines, is hauled to the bottom of the shaft and hoisted by steam power. Great care and expense are necessary to avoid accidents due to the treacherous slate which overlies the coal, and the general danger of fire damp. Six visits were made during the year, and the mine is always found in good condition. Ninety-five miners and forty day laborers find employment.

SLOPE

Is located at Salineville on the main line of the C. & P. Railroad, owned by the Ohio & Pennsylvania Coal Co., Cleveland, Ohio. John Black, Salineville, Ohio, is superintendent, and B. F. Roberts and John Whalen, mine bosses. It is a slope opening to the No. 7 seam of coal which ranges from four to six feet in thickness. It is worked on the double entry system and has fan ventilation. The coal is mined by electric power. One six ton and another ten ton motor is used to

the coal to the double parting, and from this point to the chutes by a sixteen ton motor. A new tippie has been erected with four new cages having electric hoists making this one of the most complete outfits in the district. On September 8th, John W. House, was instantly killed by a fall of slate in the O'Bryan entry while at work making a cross-way from this entry to the Brown entry. Seven visits were made to this mine during the year. Two hundred miners and fifty day hands find employment.

CEDAR HILL

Is situated one-half mile east of Salineville on the main line of the C. & P. Railroad. John Gallagher is superintendent and mine boss. It is a drift opening to the No. 7 seam of coal which varies in thickness from three to six feet at this point. The mine has been changed from the single to the double entry system, and is ventilated by a fan. This mine was formerly owned by J. F. Strabley, Salineville, Ohio, but is now owned by Upstill, Arthur & Co., Cleveland, Ohio. The new company have placed the mine in first class condition, and employ from thirty to forty miners, and eight day men.

HAYES

Is located at Salineville, Ohio, on a branch of the C. & P. Railroad. and is owned and operated by J. H. Strabley, Salineville, Ohio. The opening is a drift into the No. 7 seam of coal, and is about five feet in thickness. It is worked on the double entry system and has furnace ventilation. The solid coal was supposed to have been exhausted, but an entry having been driven through the fault penetrated a pocket of coal which is supposed to contain from 25 to 40 acres. About twenty miners and four day hands find employment at this time.

HAYESVILLE

Is located one-half mile east of Salineville on the main line of the C. & P. Railroad, and is owned by J. P. Rainey, Cleveland, Ohio. Matthew Smith, Salineville, Ohio, is superintendent and mine boss. This is a drift opening into the No. 7 seam of coal which is about three feet in thickness. It is worked on the single entry system, and has furnace ventilation. This mine has been idle for about eight years but was reopened during the year. Thirty-eight miners and six day hands are employed. The mine was always found in good condition.

HEATHERINGTON BIG VEIN

Is situated on a branch of the C. & P. Railroad, and is owned by Heatherington Bros., Salineville, Ohio. Richard Heatherington is superintendent and mine boss. The opening is a drift to a pocket of the Strip vein

of coal which at this point is 7 feet in thickness. It is worked on the double entry system, with furnace ventilation. The solid coal in the mine is all exhausted. About fifteen miners and three day hands find employment.

HEATHERINGTON STRIP VEIN

Is located in Salineville, Ohio, on a branch of the C. & P. Railroad, and is owned by the same parties as the Heatherington Big Vein mine, and under the same management. The opening is a drift to the Strip vein which at this point is about two feet and eight inches in thickness. It is worked on the single entry system, and is ventilated by means of a furnace. Three visits were made during the year, and the mine was always found in good condition. Twenty-five miners and five day hands are employed at this mine.

PLEASANT VALLEY NO. 6

Is situated at Negley on the P., L. & W. R. R. and is owned by the Powers Mining Co., Negley, Ohio. E. W. Powers is superintendent and P. H. Murphy is mine foreman. This is a drift opening into the No. 6 seam of coal which is here two feet and eight inches in thickness. It is worked on the single entry plan and is ventilated by a furnace. On my first visit to this mine it was found in very poor condition. The doors and brattices throughout the mine were ordered repaired. On my second visit the repairs had been made, and the mine in fair order. Twenty-five miners and five day hands are employed.

PLEASANT VALLEY NO. 7

Is located at Negley on the P., L. & W. R. R., and is owned and managed by the same company as the No. 6 mine. It is a drift opening to the No. 7 seam of coal, and is worked on the single entry system. These mines were formerly owned by the Holly Coal Co. Twenty-six miners and six day hands find employment. This mine is ventilated by means of a furnace.

QUAKER VALLEY

Is situated at Rogers on the P. L. & W. R. R., and is owned by the Quaker Valley Mining Co. W. H. Warner, Cleveland, Ohio, is superintendent, and Wm. Weikart mine foreman. It is a drift opening to the No. 6 seam of coal, which at this point is about 35 inches in thickness. It is worked on the single entry system, and is ventilated by means of a fan. Eighteen miners and four day hands were employed at this mine.

DEWEY

Is located at Newhouse on the P., L. & W. R. R., and is owned by the Elkton Mining Co. C. C. Herriott, Elkton, Ohio, is the superintendent and Charles Stackhouse is mine boss. This is a drift opening to the

No. 6 seam of coal, which is here about three feet in thickness. It is worked on the single entry system, and ventilated by a furnace. Twenty miners and three day hands find employment here.

PINE HILL

Is situated at Teegarden, on a branch of the Erie R. R. and is owned by Card & Prosser. Thos. Prosser, Lisbon, Ohio, is superintendent and Wm. Lewis is mine boss. It is a shaft opening into the No. 3 vein of coal which is about three and one-half feet in thickness. It is worked on the single entry system, and is ventilated with a fan. About forty miners and eleven day hands find employment.

CARD & PROSSER NO. 4

Is located on a branch of the Erie R. R., and is owned by Card & Prosser. Thos. Prosser, Lisbon, Ohio, is superintendent, and David Lewis acts as mine boss. This is a drift opening into the No. 6 seam of coal which at this point is about two feet and four inches in thickness. The mine is worked on the single entry system and is ventilated by a fan. From fifteen to twenty miners find employment. This mine was always found in good condition.

CHERRY VALLEY NO. 3

Is situated at Washingtonville on the Erie R. R., and is owned by the Cherry Valley Iron Works. C. E. Peters, Leetonia, Ohio, is superintendent, and Daniel McGrath is mine boss. This is a slope opening into the No. 3 seam of coal, which is about three feet and four inches in thickness. It is worked on the single entry system, and is ventilated by a fan. The coal is hauled to the chutes by rope haulage, almost the entire output of which is consumed by the company's mills at Leetonia. A manway was driven from the No. 4 vein to the No. 3, thus giving the employes in the mine an escapement way. It is also used as an intake. About one hundred and twenty-five miners and twenty day hands are employed.

SALEM

Is located on the Salem R. R., three miles east of Salem, and is owned by the Salem Coal Co. Wm. Dunn is superintendent and mine boss. This is a drift opening into the No. 3 seam of coal which is about three feet and four inches in thickness. It is worked on the single entry system, and is ventilated by means of a fan. This mine is kept in first class condition. Seventy-five miners and ten day hands find employment here.

FAIRFIELD NO. 2

Is located at New Waterford on the main line of the P., Ft. W. & C. R. R., and is owned by the East Fairfield Coal and Mining Co. T. D. Sutherin is superintendent and W. P. Shasteen is mine boss. This is a

drift opening into the No. 6 seam of coal which is three and one in thickness. The mine is worked on the single entry system ventilated by a fan. Rope haulage is used to convey the coal to the incline. One hundred and twenty-five miners and twenty hands are employed. This mine is in first class condition.

PROSPECT HILL

Is located at East Palestine on the P., Ft. & C. R. R., and is owned by the Prospect Hill Coal Co. W. S. Lewis has the entire supervision of the mine. It is a slope opening into the No. 6 seam of coal, and three and one-half feet in thickness at this point. It is worked on a single entry system and is ventilated by a fan. Rope haulage is used to convey the coal from the mine to the tippie. With the exception of the mine being troubled with water, it is in fair condition. About fifty and thirteen day hands find steady employment.

LISBON

Is situated at Lisbon on a branch of the Erie R. R., and is owned by the Lisbon Coal Co. E. J. Marshall, Lisbon, Ohio, is superintendent. F. Waters is mine boss. This is a drift opening to the No. 3 seam of coal which at this point is about three feet and seven inches in thickness. It is a new mine being worked on the single entry system and is ventilated by a fire basket and exhaust steam. The coal is hauled to the tippie by use of an endless rope. About seventy-five miners and twelve day hands are employed here.

STATE LINE DRIFT NO. 1

Is located at East Palestine on the P., Ft. W. & C. R. R., and is owned by the State Line Coal Co. H. Laughlin, East Palestine, Ohio, is superintendent, and Geo. Sutherin is mine foreman. About 450 feet of main haulway in this mine is located in Ohio, which is in good condition. All of the workings of the mine are in Pennsylvania. Rope haulage is used to convey the coal to the tippie.

STATE LINE SLOPE NO. 2

Is situated at East Palestine, and is owned and managed by the same company as the No. 1 mine. It is a slope opening into the No. 7 seam of coal, which is about two and one-half feet in thickness. The mine is about three and one-half feet of clay which lies directly under the No. 7 seam of coal. About seventeen miners and seventeen day hands find employment. The mine is kept in first class condition.

STATE LINE NO. 3

Is located at East Palestine, and is owned and managed by the same company as the No. 1 and No. 2 mines. This is just a new opening and employs from six to eight men.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Eagle	Drift	C. E. Cobb.....	6	Beloit.
Wooster	"	John Wooster	8	Wellsville.
Wheat Hill	"	Wheat Hill Coal Co....	8	East Palestine.
Farrs	"	John Wilson	4	Lisbon.
Average	Slope	John Smith	7	Washingtonville.
Buck	Drift	Neven Buck.....	3	East Fairfield.
Meehan	"	John Meehan	2	Lucerne.
Anderson	"	Anderson Bros	3	Lisbon.

CLAY MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Operator. Name of Owner or	Number of Men.	P. O. Address.
Oak Hill Slope.....	Slope	Columbia Fire Clay Co.	9	Washingtonville.
Walkers No. 1.....	Drift	American Clay Mfg. Co.	6	East Liverpool.
Walkers No. 2.....	"	" "	7	"
Lythe No. 1.....	"	" "	4	"
Lythe No. 2.....	Shaft	" "	4	"
Buckeye	Drift	Buckeye F. B. Co.....	9	Wellsville.
Vulcan	"	Vulcan Clay Co.....	7	"
Champion	"	John Wooster	3	"
K. T. & A.	Slope	American Clay Mfg. Co.	9	East Liverpool.
Coleman	Drift	Chas. L. Coleman.....	5	Lisbon.
Ohio Cement	"	Ohio Cement Co.....	9	"
W. S. Clay No. 1.....	"	W. S. Clay Mfg. Co....	7	"
W. S. Clay No. 2.....	"	" "	6	"
Keystone	"	Keystone F. C. Co.....	4	"

HARRISON COUNTY.

MESSENGER

Is located at Bowerstown, on the P., C. C. & St. L. R. R., and is owned by the East Massillon Coal Co. This mine was idle during the first part of the year.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Patton	Drift	Sam'l Patton	3	Bowerstown.
Czatt	"	G. W. Czatt	4	Tappan.
Hogland	"	I. Hogland	2	"
Copeland	"	Wm. Blackwell	3	"
Ramsey	"	F. Ramsey	2	Marysville.
Rogers	"	C. Rogers	3	"
Tipton	"	A. Tipton	2	Hattonia.
Keesy	"	J. Keesy	3	Moraville.
Martin	"	Martin Bros	2	Cadiz.
Patterson	"	J. H. Patterson	1	"
Campbell	"	J. W. Campbell	2	"
Hedges	"	Wm. Hedges	2	"
Clemens	"	S. C. Clemens	1	"
Long	"	R. Long	3	"
Rife	"	J. W. Rife	2	"
Moorehead	"	L. A. Moorehead	1	"
Cochran	"	R. R. Cochran	3	"
Farr	Shaft	J. Farr	2	"
Hedges No. 2	Drift	R. Hedges	2	"
Welch	"	B. D. Welch	2	"
Irons	"	Shark & Ross	4	Tippecanoe.
Stephens	"	Frank Stephens	2	"
Foutz	"	Joseph Foutz	4	"
Evans	Shaft	A. J. Evans	3	Freeport.
Stewarts	Drift	J. Sweaney	4	"
Hess	Slope	D. F. Hess	5	"
Weyandt	Drift	A. Weyandt	2	Bowerstown.
McKane	"	J. McKane	1	"
Stebbons	"	Jos. McLandsborne	2	Station 15.
Snyder	"	E. Snyder	1	Greenough.
Mattern	"	W. Mattern	1	Folks.
Hanna	"	Wm. Hanna	2	"
Lease	"	Addison Lease	3	Means.
Legget	"	Thos. Legget	2	Hopedale.
Skelley	"	Jas. Skelley	1	"
Copeland No. 2	"	J. Copeland	2	Greenough.
Copeland No. 3	"	H. Copeland	3	Folks.

JEFFERSON COUNTY.

LONG RUN NO. 1

Is located in Mt. Pleasant township on a branch of the W. & L. E. R. R., and is owned and controlled by the W. & L. E. and P. Coal Co. Geo. Hornickel, Dillonvale, Ohio, is superintendent, and Wm. Fitzgerald, Startle, Ohio, is mine foreman, with Geo. Chamberlands as assistant. This is a drift opening into the No. 8 seam of coal, worked on the double entry system, and is ventilated by a fan. The coal is mined by the Jeffrey mining machines, and hauled to the top of the incline by a motor. One fatal accident occurred at this mine during the year. Luther Payne, colored, was instantly killed on the fourth day of May, 1900, by a loaded trip of coal in the main entry. This mine was always found in first class condition. Two hundred and fifty miners and fifty day hands are employed.

DILLON NOS. 1, 2 AND 3

Are located at Dillonville on the main line of the W. & L. E. Railroad, and are owned by the W. & L. E. & P. Coal Co. Geo. Hornickel is superintendent, and Wm. Fitzgerald is mine foreman, with Fred Aspenwall as assistant. These are drift openings into the No. 8 seam of coal, and are laid out and worked on the double entry system. All of these mines are ventilated by one fifteen foot Brazil fan which supplies them with an abundance of air. The coal is mined by electric power, the Jeffrey mining machines being used. A fifteen ton motor is used to haul the coal. This mine is one of the largest in the district and always found in first class condition. Four hundred miners and eighty day hands are employed.

KELLEY NO. 2

Is situated at Warrenton on the River Division of the C. & P. Railroad, and is owned by the Kelley Coal Co. E. J. Lewis is superintendent, and D. B. Brooks, mine boss. This is a drift opening into the No. 8 seam of coal, the double entry system of ventilation being in use. A new fan has been erected during the year which gives entire satisfaction. The coal is mined by electric power, the Morgan-Gardner machines being used to cut the coal. About forty miners and ten day hands find employment at these works.

MCFADYEN

Is located at Carmen on the main line of the P. C. C. & St. L. Railroad, and is owned by the McFadyen Coal Co. J. C. Allen of Cleveland, Ohio, is superintendent, and John Moon is mine foreman. This opening is a drift into the No. 8 seam of coal which is here about four and one-half feet in thickness. It is worked on the double entry system, and is ventilated by means of a fan. This mine is located about three miles from the

railroad, the coal being hauled to the chutes by a small locomotive, and it is used almost exclusively for coaling on the Panhandle Railroad. About forty miners and from ten to twelve day men find steady employment at this mine.

HIGH SHAFT

Is situated in the city of Steubenville and is owned by the Steube Coal and Mining Co. This mine is under the management of Smurthwaite, with Geo. Arthurs and Wm. Smurthwaite, Jr., as bosses. This opening is a shaft 280 feet in depth to the No. 7 seam of coal which varies in thickness at this point from three feet, six inches to three feet, ten inches. This mine is worked on the County of Duquesne system and is ventilated by means of a fan. An electric plant has been installed during the year. The coal is cut by the Morgan-Gardner machines, and is hauled to the bottom of the shaft by a six ton rope. This is probably the oldest mine in the district, the shaft being about the year 1856 or 57. The product of this mine of late years has been confined to the city of Steubenville where it is used for domestic purposes. The mine was always found in first class condition, affords employment to about forty miners and the same number of day hands.

BERGHOLZ

Is located at Bergholz on the O. R. & L. E. Railroad, and is leased to Kirk & Schreckler. J. G. Kirk is superintendent, and D. W. Schreckler is mine foreman. This is a drift opening to what is known as the Strip vein and is worked on the single entry system. The coal is about one and one-half feet in thickness at this point. Seventeen miners and day hands find employment. This mine is ventilated by means of a fan.

NEW SLOPE

Is located at Bergholz on the O. R. & L. E. Railroad, and is owned by Hicks & Wilson. E. E. Hicks is superintendent, and Wm. Bates is boss. This is a slope opening to the Strip vein of coal. It is worked on the single entry plan, and is ventilated by a fan. This mine has been idle almost the entire year.

ROLLING MILL NO. 2

Is situated at Irondale, Ohio, and is owned by Wm. Banfield. Thomas is superintendent and mine boss. The opening is a drift to the No. 7 seam of coal which is of a very poor quality and ranges from four to six feet in thickness. It is worked on the double entry system, and is ventilated by a furnace. The entire output of this mine is consumed by the Rolling Mills. The solid coal is almost exhausted. From fifteen to eighteen miners and five day hands are employed.

ROLLING MILL NO. 3

is located at Irondale and is owned by the same parties as the No. 2 mine. Wm. Banfield has the entire supervision of this mine. It is a slope opening to the No. 3 vein of coal which is about three feet thick at this place. It is conducted on the single entry system. A new fan has been erected which furnishes an abundance of air. The entire output of this mine is consumed by the Tin Mills of this place. Twenty-seven miners and five day hands are employed.

DIAMOND NO. 2

Is situated one mile east of Hammondsville, on the main line of the C. & P. Railroad, and is owned by Smith & McCulley, Wellsville, Ohio. Henry Welsh is superintendent and mine boss. This is a drift opening to the No. 7 seam of coal. The solid coal in this mine has been exhausted, and nothing remains except the pillar work. From fifteen to twenty miners find employment.

WILSON

Is located on Coal Hill three miles southwest of Steubenville, and is owned by Henry Wilson. It is a drift opening into the No. 8 seam of coal, and is worked on the double entry system, with furnace ventilation. The coal is teamed to Steubenville where it is used for domestic purposes. This mine was always kept in first class condition. From ten to fifteen miners are employed during the fall and winter months.

GREAT WESTERN

Is located at Toronto, and is owned by the American Clay Mfg. Co. R. M. Francy is superintendent, and Jas. Duke is mine foreman. This opening is a drift to what is known as the Roger vein which is about two feet and four inches in thickness at this point. It is worked on the single entry plan, and is ventilated by means of a furnace. This mine is always found in good condition. The entire output from this mine is consumed at the Clay Works. From twenty to twenty-five miners are steadily employed here.

CALUMET

This mine is located at Calumet, and is owned by the American Clay Mnf. Co. Samuel McAdoo is superintendent and Geo. Kniesly is mine boss. The opening is a drift into the Roger vein of coal, and is mined on the single entry system. A furnace is used to ventilate the mine. An entry has been driven through the hill which has made an improvement in the way of ventilation. The output of this mine is consumed at the sewer pipe works. From ten to twelve miners and two day hands are employed here.

OHIO VALLEY

Is situated at Toronto and is owned by the American Clay Mfg. Co. F. Myers is superintendent, and Geo. Duncan is mine boss. The output of this mine is consumed by the sewer pipe works. It is worked on single entry system, and has always been found in good condition. From nine to twelve miners have steady employment.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address
Hill	Drift	S. R. Hill.....	2	Steubenville.
Bates	"	John Bates	3	"
England	"	McFarland & Permar...	6	"
Owens	"	B. F. Owens.....	7	"
Tweed	"	J. D. Tweed & Son....	6	"
High Vein	"	John Householder	3	Irondale.
Excelsior	"	Pat Connor	2	Calumet.
Hill Top	"	Calumet F. C. Co.....	5	Toronto.
Nicholson	"	John Nicholson & Son..	2	Dillonvale.
Wesley	"	Chas. Wesley	3	Mingo.
Hill	"	John Curfman	4	"
Markle	"	Kennedy, Kling & Co..	6	Toronto.
Connor	"	Excelsior F. C. Co....	4	Calumet.
Cable Shaft	Shaft	John Manten	2	Wintersville.
Finley	Drift	W. F. Morland	2	Costonia.
Pall	"	J. F. Ball.....	3	Calumet.
Taylor	"	W. A. Taylor, Jr.....	7	Bergholz.
Nelson	"	Wm. Nelson	3	Steubenville.
Vankirk	"	Joe Van Kirk.....	4	"
Jefferson	"	C. F. Young.....	2	Toronto.

CLAY MINES IN JEFFERSON COUNTY.

CALUMET

Is situated at Calumet on the River Division of the C. & P. Railroad and is owned by the American Clay Mfg. Co. Samuel McAdoo is superintendent and Geo. Kniesly is mine boss. It is a shaft opening at 25 feet in depth to the clay which is about 8 feet in thickness. The mine is ventilated by steam exhaust, and is one of the best clay mines in the district, and affords employment to ten miners and three day hands.

GREAT WESTERN

Is located at Toronto on the C. & P. Railroad, and is owned by the American Clay Mfg. Co. It is managed by R. M. Francy, Toronto, Ohio, with Daniel Hinkle as mine foreman. This mine is ventilated by a fan with

also ventilates the Forest City mine, the two mines being connected. From ten to twelve miners and four day hands find employment.

FOREST CITY

Is situated at Toronto and is owned by the same parties as the Forest City mine. D. W. Francy, Toronto, Ohio, is superintendent, and Jas. Milne is mine boss. The opening is a slope to the seam of fire clay which is about ten inches in thickness. This mine is connected with the Great Western and is ventilated by a fan. Both mines are in good condition. From ten to twelve miners are steadily employed.

CLAY MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Lacey	Slope	Adolph Pritschaw	3	Irondale.
Wallace	Drift	W. Va. Clay Co.	5	"
Markle	Shaft	Kennedy, Kling & Co. .	5	Toronto.
Connor	Drift	Pat Connor	5	"
Ohio Valley	Shaft	American Clay Mfg. Co.	6	"
Empire	"	Empire Fire Clay Co. .	5	Empire.
None Such	"	Stratton Bros	6	"
Enterprise	Drift	Minor Fire Clay Co. .	5	"
Freeman	"	Freeman Fire Clay Co. .	4	Freeman.
Giant	Shaft	Toronto Fire Clay Co. .	6	Toronto.
Jefferson	"	C. F. Young	4	"
Stratton	"	Stratton Bros	3	Empire.
Standard	Drift	Standard Brick Works.	5	"
Minor	"	Minor Fire Clay Co. .	7	"

COAL MINES IN MAHONING COUNTY.

FAIRVIEW NO. 4

Is located at Washingtonville, Ohio, on the Erie Railroad, and is owned by the Ohio Coal and Clay Co. J. C. Weikert has the entire supervision. It is a drift opening into the No. 4 seam of coal, which is two feet in thickness at this point. It is worked on the single entry system, and is ventilated by a furnace. The solid coal in this mine is almost exhausted. Rope haulage is used to convey the coal to the chutes. Fourteen miners and five day hands are employed.

FAIRVIEW NO. 3

Is situated at Washingtonville, on the Erie Railroad, and is owned by the Ohio Coal and Clay Co. H. D. Hileman is superintendent, and M. Pas

Brady is mine boss. The opening is a slope to the No. 3 seam of coal which is about two feet and eight inches in thickness. It is worked on the single entry plan, and is ventilated by a furnace. An air shaft has been sunk, and a fan will be erected in the near future. Twenty-four miners and four day hands find employment.

NATIONAL

Is located at Washingtonville on the Erie Railroad, and is owned by the Washingtonville Mining Co. Frank Stouffer, Washingtonville, Ohio, is superintendent, and David Stouffer is mine boss. This is a shaft opening into the No. 3 seam of coal which varies in thickness at this point from three to four feet. It is worked on the single entry system, and is ventilated by a fan. This mine is usually kept in first class condition, and employs forty-five miners and eight day men.

MCKINLEY

Is situated at Beloit, on the P. Ft. W. & C. Railroad, and is owned by the Ohio Brick and Coal Co. C. C. Cook, Beloit, Ohio, is superintendent, and M. A. Miller is mine boss. It is a shaft opening sixty-five feet in depth to the No. 3 seam of coal which varies in thickness from three to three and one-half feet. This mine is conducted on the single entry system, and is ventilated by a fan. On July 12, this mine was visited and the ventilation was found deficient. A new fan was ordered and erected which gives entire satisfaction. Forty miners and ten day hands are employed.

BELOIT SHAFT

Is located at Beloit on the P. Ft. W. & C. Railroad, and is owned by the Youngstown Brick and Clay Co., but was abandoned about June 1, 1900.

STAMBAUGH

Is located in Youngstown township, about three miles southwest of Youngstown, and is owned by the Evans Block Coal Co. Reese T. Davis has entire supervision. This is a shaft opening to the No. 1 seam of coal and is about three feet in thickness at this point. The entire output of this mine is sold to the domestic trade in Youngstown. This mine was visited on November 9th. Ten miners and six day hands were employed.

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MINES EMPLOYING LESS THAN TEN MEN

MAHONING COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Barber	Drift	Hemmingway & Co.	4	Beloit.
Courtney	"	T. L. Ships	3	"
Urmson	"	R. Urmson	2	"
Thompson	"	A. C. Thompson	2	"
Chestnut Hill	Shaft	Tyrell & Rider	4	Youngstown.

PORTAGE COUNTY.

HUTSON NO. 2

Is situated at Davis Roads, on the Alliance & Northern R. R., and is owned by the Hutson Coal Co., Cleveland, Ohio. T. J. Williams, Deerfield, Ohio, is superintendent, and Roger Lewis mine foreman. This is a shaft opening into the No. 1, or Palmyra seam of coal, 190 feet, which at this point is from two and one-half to three and one-half feet in thickness. This mine is conducted on the single entry system, and is ventilated by a fan. During the past year the work of this mine has been confined to the drawing of pillars, as the solid coal is almost exhausted. Twenty-seven miners and eight day hands are employed.

HUTSON NO. 4

Is located at Deerfield, on the Alliance & Northern R. R., and is owned by the Hutson Coal Co., Cleveland, Ohio. T. J. Williams is superintendent, and J. P. Williams is mine foreman. This is a shaft opening 214 feet in depth to the No. 1, or Palmyra block seam of coal, about three feet and eight inches in thickness, and of excellent quality. The mine is worked on the single entry plan, and has fan ventilation. At each visit to this mine it was always found in first-class condition. About ninety miners and thirty day hands are employed here.

HUTSON NO. 5

Is situated at Lloyd, on the Alliance & Northern R. R., and is owned and managed by the same company as the Nos. 2 and 4 mines, with the exception of Rodger Lewis, who is employed as mine foreman. This is a shaft opening 160 feet in depth to the No. 1, or Palmyra seam of coal, which is about three and one-half feet in thickness at this point. It is worked on the single entry system, and has fan ventilation. From fifty to sixty miners and twenty day hands are employed at this mine. It was always found in good condition.

FILER SHAFT

Is situated in Palmyra township, and is owned by John Filler, Newt Falls. This is a shaft opening 40 feet in depth to the No. 1 seam of coal and is about three feet in thickness at this point. The entire output of this mine is used for domestic trade. Five miners and three day hands are employed at this mine.

TUSCARAWAS COUNTY.

THOMPSON RUN EAST

Is located on a branch of the W. & L. E. R. R., three miles southwest of Sherrodsville, and is owned by C. W. Somers, Cleveland, Ohio. Wm. Maloney, Sherrodsville, Ohio, is superintendent, and Steve Fitzpatrick is mine foreman. This is a drift opening to the No. 7 seam of coal, which varies in thickness from four and one-half to six feet. The coal is mined by the Jeffrey Mining Machines, a 13-ton motor being used to haul the coal to the chutes. About one hundred miners and seventeen day hands find employment. This is just a new mine, and is kept in first-class condition, and promises to be one of the largest in the district. This mine is operated on the double entry system and has fan ventilation.

THOMPSON RUN WEST

Is located a short distance from the Thompson Run East mine, and is owned by and controlled by the same parties. It is a drift opening to the No. 7 seam of coal, which will average about five feet in thickness. It is worked on the double entry system and ventilated by means of fan. The coal is mined by electric power, and hauled to the chutes by a motor. The mine is in first class condition, and employs about ninety-five miners and sixteen day hands.

REPORT OF REES T. DAVIS,

Inspector of the Seventh District, from November 15, 1899, to
May 31, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR — As Inspector of the Seventh Mining District of the state of Ohio, I herewith respectfully submit my last official report for the period beginning November 15, 1899, and ending May 31, 1900.

During the time embraced in this report there was only one fatal accident in this district, and that occurred in a retail mine at Lisbon, Ohio, the unfortunate victim being Stephen McNeal, who was part owner of the mine. The deceased came to his untimely death by a fall of slate at the face of the entry which he was driving, killing him instantly. A full report of this accident was forwarded your office at that time.

During the period of my connection with the mining department I have endeavored to do my duty honorably, and have tried to enforce the mining laws considerably and justly to all concerned. I bespeak for my successor the same generous treatment, and uniform courtesy which has been accorded me by miners and operators throughout the district.

Wishing for yourself and assistants a successful administration of the affairs of the mining department, I am,

Very truly yours,

REES T. DAVIS,

Inspector of Seventh District.

COLUMBIANA COUNTY.

PROSPECT HILL NO. 2

Is located at East Palestine, on the Pittsburg, Fort Wayne & Chicago R. R., and is owned by the Prospect Hill Coal Co. W. S. Lewis is superintendent, and S. M. Hoon is mine boss. This is a new slope opened near the No. 1 mine, which has just been abandoned, into the No. 6 vein of coal which is here from three to four feet thick. It is worked on the single entry system, and fan ventilation is used. The No. 2 mine is connected with the No. 1 mine, the slope of No. 1 being used for the second opening, and traveling ways. The ventilation has been deficient at the working faces by reason of no direct return airway, the air having to be forced over the caves and falls of the No. 2 mine. The company are endeavoring to get around the falls. Forty miners and twelve day hands are employed.

CARBON HILL NO. 4

Was abandoned during the fore part of the year.

CARBON HILL NO. 1

Is abandoned and worked out.

FAIRFIELD NO. 2

Is located at New Waterford, Ohio, on the Pittsburg, Fort Wayne & Chicago Railway, and is owned by the Fairfield Coal Co. Thos D. Sutherin is superintendent, and Wm. Shasteen mine boss. This is a drift opening into the No. 6 vein of coal, which is three feet and four inches in thickness at this point. It is worked on the single entry system and is ventilated by means of a fan. One hundred and twenty miners and twenty day hands find employment. This mine has been kept in excellent condition.

PLEASANT VALLEY NO. 1

Is located at Negley, on the Pittsburg, Lisbon & Western Railway, and is owned by the Powers Mining Co. G. J. Williams has entire supervision. It is a drift opening into the No. 6 vein of coal, which is nearly three feet thick at this place. It is conducted on the single entry plan and has fan ventilation. Thirty-five miners and ten day hands are employed. This mine has been idle for nearly five years, with the exception of a few months. During this period of idleness the mine had become out of repair from the presence of a squeeze and falls, causing the ventilation to be deficient as required by law. The company were placing it in as good condition as possible. The scales were tested and found correct on April 11th.

PLEASANT VALLEY NO. 2

is located near the No. 1 mine, and is owned and operated by the same company, the same conditions prevailing at this mine as at the No. 1. From four to six miners are employed in cleaning the mine.

CAMPBELL

is situated in Middleton township, on the Pittsburg, Lisbon & Western Railway, and is owned by the East Palestine Coal Co. W. S. Lewis is superintendent, and P. H. Murphy is mine boss. It is a drift opening into the No. 6 vein of coal, and is from two feet two inches to two feet and nine inches in thickness. It is worked on the single entry plan, and is ventilated by a furnace. This mine is cut up with faults, the second left entry having struck the second one. The company will not cut through this one, and the face entries between the faults does not present a very encouraging appearance. On February 10, 1900, twenty miners and three others were employed at this mine.

QUAKER VALLEY

Is located at Rogers, on the Pittsburg, Lisbon & Western Railway, and is owned by the Sterling Coal Co. John Hileman is superintendent, and Wm. Wiekert is mine boss. It is a drift opening into the No. 6 seam of coal, and is about two feet and ten inches in thickness at this point. It is worked on the single entry plan, and has fan ventilation. This mine has been kept in good condition. Twenty miners and three day hands are employed. On January 23 the scales were tested and found inaccurate.

CARD AND PROSSER NO. 4

Is located at Lisbon, on the Erie Railway, and is owned by the Card & Prosser Coal Co. Thos. Prosser is superintendent, and David Lewis is mine boss. This mine opens into the No. 6 seam of coal, and is two feet and three inches in thickness. It is worked on the single entry system, and has fan ventilation. Seventy-five miners and four day hands find employment here. This mine has been kept in good condition.

PINE HILL

Is located at Teegarden, on the Erie Railway, and is owned by the Card & Prosser Coal Co. Thos. Prosser is superintendent, and Wm. Lewis is mine boss. This is a shaft mine penetrating the No. 3 vein of coal, and is three feet and six inches thick at this point. It is worked on the single entry system and has fan ventilation. Fifty miners and eight day hands are employed. This mine was in good condition during the year.

CHERRY VALLEY NO. 3

Is located at Washingtonville, on the Erie Railway, and is owned Cherry Valley Iron Works Co. T. R. Lewis is superintendent, and McGrath is mine boss. This is a slope opening into the No. 3 coal, and is about three feet and six inches in thickness. It is worked on the single entry system, and is ventilated by a fan. Ninety nine day hands are employed here. This mine has been poorly ventilated owing to the fact that the steam power was not sufficient to drive the fan at as high a rate of speed as it should be. The company has installed two new boilers and on my last visit they were about to connect them with the fan and other machinery.

SALEM

Is situated near Washingtonville, Ohio, on the Salem Railway, owned by the Salem Coal Co. Wm. Dunn has entire supervision. This is a drift opening into the No. 3 vein of coal, which is about three feet and six inches in thickness. It is worked on the single entry plan and employs one hundred miners and fifteen day hands. This mine is in good condition. On May 31st the scales were tested and found correct.

MAHONING COUNTY.

STOFFERS

Is located at Washingtonville, on the Erie R. R., and is owned by Washingtonville Mining Co. Frank Stouffer is superintendent, David Stouffer is mine boss. This opening is a shaft into the No. 3 vein of coal which varies in thickness at this point from two feet and six inches to three feet and six inches. It is worked on the single entry system and is ventilated by means of a fan. Thirty-five miners and six day hands are employed.

MCKINLEY

Is located at Beloit, on the Pittsburg, Fort Wayne & Chicago Railroad, and is owned by the Ohio Brick and Coal Supply Co. C. C. Cook is superintendent, and M. A. Miller is mine boss. This is a shaft opening, penetrating the No. 3 vein of coal, worked on the single entry system and is ventilated by exhaust steam. A second opening has been made. Thirty-five miners and seven day hands are employed.

RYDER

Is situated near Youngstown, Ohio, on the Erie R. R., and is owned by the Chestnut Ridge Coal Co. Thos. Tyrell has entire charge. This is a shaft opening into the No. 1 seam of coal, which at this point is irregular. Fifteen miners and four day hands are employed.

PORTAGE COUNTY.

HUTSON NO. 2

Is located near Davis Roads, on the Alliance Northern Railway, and is owned by the Hutson Coal Co. T. J. Williams is superintendent, and Roger Lewis is mine boss. This is a shaft opening into the No. 1 or black coal, and is from two to three feet thick. This mine is conducted on the single entry system, and has fan ventilation. Forty miners and twelve day hands are employed. This mine is kept in fair condition.

HUTSON NO. 4

Is situated at Deerfield, on the Alliance Northern Railway, and is owned and managed by the same parties as the No. 2 mine, with the exception of J. R. Williams, who is mine boss. This is a shaft opening which penetrates the No. 1 vein of coal, worked on the single entry system, and is ventilated by means of a fan. Eighty miners and 28 day hands are employed. This mine is kept in fair condition. On March 7 the scales were tested and found inaccurate.

SUMMIT COUNTY.

TURKEYFOOT

Is located near Manchester, and ships its product over the C., A. & C. R. R., and is owned and operated by the Brewster Coal Co. J. J. Degenhard has entire charge. This is a shaft opening into the Massillon or No. 1 vein of coal, and varies in thickness from three to four feet. This mine is worked on the double entry system, a fan being used as a ventilating power. One hundred miners and twenty-seven day hands find employment. On May 9 the scales were tested and found inaccurate.

FOX LAKE

Is located near Clinton, on the C., A. & C. R. R., and is owned by the Fox Lake Coal Co. Geo. Huber has entire charge. This mine is a shaft opening into the Massillon or No. 1 vein of coal, worked on the double entry system and has fan ventilation. On March 10 the scales were tested. The small scales were found to be weighing correctly, but the large ones were found inaccurate. Seventy miners and sixteen day hands find employment here. This mine was kept in good condition.

AKRON NO. 4

Is located near Wadsworth, on the Erie R. R., and is owned by the Akron Coal Co., Akron, Ohio. V. Gerstenlagen is superintendent, and Thos. James is mine boss. This is a slope opening, penetrating the Massillon

or No. 1 seam of coal, worked on the double entry system, and is ventilated by means of exhaust steam. The coal at this point is from five feet thick, with a very poor roof overhead, being composed of soapstone, which gives considerable trouble. The ventilation at this has not been as satisfactory to the department as it should have. Thirty miners and seven others find employment here.

CARD NO. 3

Is located near Wadsworth, on the Erie R. R., and is owned by the Coal Co. Cyrus Evans is superintendent, and Ruben Brader is mine. This is a slope opening into the Massillon or No. 1 seam of coal, worked on the double entry plan, and exhaust steam is used as a ventilating power. Forty miners and ten day men are employed.

WAGONERS.

Is situated near Wadsworth, on the Erie R. R., and is owned by Wagoner, who is also superintendent, with Daniel Golden as mine. This is a slope opening which penetrates the Massillon or No. 1 seam of coal, worked on the double entry plan, and exhaust steam is used as ventilating power. Seventy miners and eighteen day hands are employed here. This mine was kept in good condition.

KLONDIKE

Is located near Wadsworth, on the Erie R. R., and is owned by Hutson & McIlhenny, who have entire supervision. The opening is a slope penetrating the Massillon or No. 1 seam of coal, worked on the double entry system, and employs twenty miners and three day hands. The mine was kept in fair condition.

SILVER CREEK

Is abandoned and worked out.

REPORT OF WILLIAM H. MILLER,

Inspector of the Seventh District, from July 1, to November 15, 1900.

Hon. E. G. Biddison, Chief Inspector of Mines, Columbus, Ohio:

DEAR SIR — I herewith respectfully submit my report of mines of the seventh district from the time of my appointment, July 1, 1900, to the end of the inspection year, November 15, 1900.

The time embraced in this report has not been sufficient for me to thoroughly familiarize myself with all the mines in this district, and some have received my attention more frequently than others. As this district is composed of the following counties — Holmes, Medina, Summit, Wayne and Stark — it requires considerable time to get over it. However, in the five different counties comprising this district 107 visits were made for the purpose of examining mines, investigating the causes of fatalities, and the testing of scales.

I regret very much to report six fatal accidents, since I have taken charge of this district, which are as follows: Christian Held, killed in the Massillon Mining Co.'s mine, Stark county, on the 12th day of July; death due to the accidental fall of rock. Albert Aman, instantly killed on the 13th day of July in the Yohe Mine No. 2, Stark county; death caused by a fall of rock. George Scott, injured in the Card No. 3 mine, Medina county, on the 16th day of July, died on the 21st day of July; death due to the accidental fall of coal. Edward Eckellbert, killed in the Minglewood Mine No. 4, Stark county, on the 13th day of September; death caused by a fall of rock in his room. John Stares, killed in the Carlin mine, Holmes county, on the 24th day of October; evidence developed that death was caused by the accidental fall of coal in removing a pillar. Joseph Dudick met with an accident at the North Massillon No. 2 mine, Stark county, on the 30th day of October, and died on the 2nd day of November; injured by a blast resulting in his death.

Fourteen sets of scales were tested. The permanent improvements in this district made during the year are as follows: Two fans erected, three air shafts sunk, and one stairway built. Six new mines have been opened, and two mines abandoned.

I wish here to express my appreciation to the operators for their willingness to comply with all my recommendations, and to thank the miners for their valuable assistance in aiding me in every possible way to make my work a pleasure and success. I also wish to extend to you my sincere thanks for your courteous treatment and advice, which was always forthcoming whenever solicited, and which has proved a substantial support and a never failing guide.

Very respectfully, W. H. MILLER,

Newman, Ohio, November 15, 1900. *Inspector of Seventh District.*

MEDINA COUNTY.

CARDS NO. 3

Is located near Wadsworth, on a branch of the Erie Railroad, owned by the Card Coal Co., Cleveland, Ohio. O. V. Dibble, Wad Ohio, is superintendent, and G. C. White, of the same place, is mi This is a slope mine opening into the No. 1 seam of coal which feet in thickness at this point. Exhaust steam is used as a ver power. Mr. White, being in charge only a short time, is making sible improvements to bring this mine to the standard as required Fifty-six miners and thirteen day men are employed. It is co on the double entry system. George Scott, injured July 16, 19 on July 21st, of the same month.

CARDS NO. 4

Is located near Wadsworth, Ohio, on a branch of the Erie Railw is owned and operated by the same company as the No. 3. O. V. is general manager, and Reuben Brader is mine boss. It is a slop ing into the Massillon No. 1 seam of coal, and is four feet in tl at this point. It is worked on the double entry system and is ve by exhaust steam. The number of miners employed are two miners and five day hands. I made two visits to this mine, and it in very poor condition, the ventilation and drainage being ba air course was obstructed with refuse, which was ordered clean the break-throughs closed. Also requested a door put up in the j canvas, and the stack on the air shaft made fifteen feet higher. managers agreed to do. On my next visit my orders were foun partially carried out and preparations were being made to comp the others.

EASTER

Is located near Wadsworth, Ohio, on a branch of the Erie Railw is owned by the Silver Creek Coal Co., Wadsworth, Ohio. Richar is the superintendent, whose postoffice address is Wadsworth Peter Schawlbach, Doylestown, Ohio, is mine boss. This is a ne opening, penetrating the No. 1 or Massillon seam of coal at a d five feet. It is conducted on the double entry system, and the r ventilation is exhaust steam. The number of miners employed is one, and day hands five. This mine received three visits during t Upon my first visit the mine was found in fair condition. M visits were made for the purpose of ascertaining that the proper tions were being taken in the entry that was being driven towar doned mines that are filled with water.

WAGONER.

ted near Doylestown, Ohio, on a branch of the Erie Railway, and d by the Excelsior Coal Co., Akron, Ohio. Daniel Golden is the manager, Doylestown, Ohio. It is a slope opening penetrating ssillon No. 1 seam of coal, and is four feet thick at this place. ble entry system is in use, and exhaust steam is used for ventilat- poses. Sixty miners and fifteen day men are employed. This ceived one visit, at which time I requested the closing of some roughs. With this exception the mine was in fair condition.

WHELAN

ed near Wadsworth, Ohio, on the Erie Railroad, and is owned by on Coal Co., Akron, Ohio. John Whelan, Wadsworth, Ohio, is tendent, and John Whelan, Jr., of the same place, is mine boss. ening is a slope opening penetrating the Massillon No. 1 seam of a depth of four feet. It is worked on the double entry system, aust steam and fire basket are the modes of ventilation. Twenty- miners and six day hands were employed. This mine has been once, and it was found in an ordinary condition. The brattices dered repaired, and also some of the break-throughs closed, which prove the ventilation to a great extent. The mine boss agreed e these repairs as soon as possible.

KLONDIKE

ed near Wadsworth, Ohio, on the Erie Railroad, and is owned Hutchin- son Coal Co., Wadsworth, Ohio. John Hutchinson, Wads- Ohio, is superintendent, and J. McNally, of the same place, is oss. This is a slope opening penetrating the Massillon seam of hich is three and one-half feet in thickness at this point. The entry system is in use with furnace ventilation. Eight miners and y hands are employed. This mine was visited once, and found e furnace was neglected which caused the ventilation to be impaired. sted that the furnace be relighted and kept burning, which will im- he ventilation. Otherwise the mine was in fair condition.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
.....	Slope	John Bierbeck	4	Wadsworth.
.....	Shaft	Ross A. Klein.....	5	" "

SUMMIT COUNTY.

FOX LAKE

Is located near Clinton, Ohio, on the C. A. & C. and B. & O. R. and is owned by the Fox Lake Coal Co., Cleveland, Ohio. Thomas Williams is superintendent, Canal Fulton, Ohio, and has full charge of mine. It is a shaft opening 145 feet deep into the Massillon No. 1 seam of coal, which is four feet in thickness at this point. It is worked on a double entry system and has furnace ventilation. District Inspector H. Williams has recently taken charge of this mine. Two visits were made to this mine, and on my second I found that my orders had been carried out, which greatly improved the condition of the mine on a general standpoint.

TURKEYFOOT

Is situated near Manchester, on the C. A. & C. and B. & O. R. R. It is owned by the Brewster Coal Co., Akron, Ohio. J. J. Dage Nimisila, Ohio, has the entire supervision of this mine. It is a shaft opening penetrating the Massillon No. 1 seam of coal, which is four feet thick at this point. It is worked on the double entry system, and has a furnace mode of ventilation. Fifty miners and twenty-one day laborers find employment here. This mine was visited three times. On my first visit I found that the break-throughs in the main air courses had been neglected, and I requested that they be immediately repaired, which was agreed to. Otherwise the mine was in fair condition. On October 1st I was called by the Mine Committee for the purpose of examining the guides and cages which were found in a poor condition. They were ordered repaired, which was complied with. On November 13th I visited the mine and found that my previous requests had been carried out. The scales were also tested and found correct.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Nimisila	Drift	Louis Johns	3	Nimisila.
Whittacre	"	John Whittacre	2	Inland.
Middleton	"	Lee & Collier	9	Barberton.

STARK COUNTY.

EUREKA

Is located three miles east of Canal Fulton, on the branches of the C. L. & W. and P., Ft. & Chicago R. R.'s, and is owned by the Cleveland Coal Co., Massillon, Ohio. Louis Brenkamp, Massillon, Ohio, has the entire supervision. It is a shaft opening 100 feet in depth to the Massillon No. 1 seam of coal, worked on the double entry system, and a fan is used as the ventilating power. The coal is four feet in thickness at this point. Eighty miners and twenty-five day hands are employed. This mine was visited twice and found in fair condition. The scales were also tested and found correct.

CRYSTAL SPRING

Is located near the village of Millport, on a branch of the C. L. & W. R. R., and is owned by the Crystal Spring Coal Co., Massillon, Ohio. B. J. Moore, Massillon, Ohio, has full charge. The opening is a shaft eighty feet in depth penetrating the Massillon seam of coal to a depth of four feet. It is conducted on the double entry system, and is ventilated by exhaust steam. Twenty-two miners and nine day hands find employment here. This mine received three visits. On my second visit the mine was found idle. On the third visit the mine was found in fair condition.

WARWICK NO. 1

Is situated three miles south of Greenville, on the W. & L. E. R. R., and is owned by the Warwick Coal Co. George Swier is superintendent, whose postoffice address is Massillon, Ohio. C. E. Swier, Massillon, Ohio, is mine boss. This is a shaft opening two hundred feet deep into the Massillon or No. 1 seam of coal, which is here five feet deep. The double entry system is in use, and fan ventilation. On my first visit the mine was found in fair condition, and employed fifty-four miners and fourteen day hands. On September 17 I was called to the mine for the purpose of testing the scales, and found them weighing accurately. My third visit was made on October 25th, when the mine was examined and found that the number of men had increased to one hundred and ten miners and twenty-one day hands. The condition of the mine was good.

WARWICK NO. 2

Is located near the Warwick No. 1 mine, on the same railway, and is operated by the same company. George Swier has the entire supervision. The opening is a shaft two hundred and seven feet deep into the No. 1 seam of coal, which is four feet thick at this point. It is worked on the double entry plan, and ventilated by exhaust steam. On my first visit fifty-six miners and fourteen day hands were employed. The second

visit was made for the purpose of testing the scales, which were found to be weighing correctly. On my third visit I found the number of men increased to eighty-two miners and twenty-three day men. Extensive repairs had also been made placing the mine in a better condition.

NORTH MASSILLON NO. 2

Is situated near Jackson Centre, on the C. L. & W. and P., Ft. Wayne Chicago R. R.'s, and is owned by Ridgeway, Burton & Co., Massillon, Ohio. John Hodgson, Canal Fulton, is superintendent and mine boss. This is a shaft opening 150 feet deep into the Massillon seam of coal which is here four feet thick. The double entry system is in use with fan ventilation. Two visits were made when I found one hundred and thirty-two miners and thirty-two day hands. The mine was found in good condition on my last visit. Joseph Dudick on October 30th died with an accident which resulted fatally on November 2nd. His death was caused by injuries received from a blast at the face of his work place.

MINGLEWOOD NO. 2

Is located near North Lawrence, on the P., Ft. W. & C. Railway, and owned by Jas. Mullins, Wooster, Ohio. Wm. Baumgardner, North Lawrence, Ohio, is both superintendent and mine boss. The opening is a shaft twenty-eight feet deep entering the Massillon or No. 1 seam of coal which is four feet in thickness at this point. It is conducted on a double entry system, and a fan is used as a ventilating power. Eighty miners and seven day hands are employed. This mine was visited twice. On my first visit the mine was found in poor condition. On returning for my second visit I found that an air shaft had been sunk, and a fan erected, which places the mine in good condition. The scales were tested and found weighing correctly.

MINGLEWOOD NO. 3

Is located near North Lawrence, on a branch of the P. Ft. W. & C. and W. & L. E. R. R.'s, and is owned by the same parties as the No. 2. Wm. Baumgardner is superintendent, and Wm. Moffitt is mine boss. It is a shaft opening 208 feet deep, penetrating the Massillon or No. 1 seam of coal, which is five feet thick at this point. It is worked on the double entry system, and a fan is the ventilating power. One hundred and fifty miners and four day hands are employed. This mine was visited twice and on my last visit was found in good condition.

MINGLEWOOD NO. 4

Is located on the same railroads and owned by the same parties as Nos. 2 and 3 mines. Wm. Baumgardner is superintendent, and John Ryan, North Lawrence, is bank boss. This is a shaft opening 200 feet

deep into the Massillon seam of coal, which at this point is four feet in thickness. It is conducted on the double entry system, and is ventilated by a fan. One hundred and twenty-two miners and forty-one day hands are employed here. Only one visit was made to this mine. It is connected with the Minglewood slope. These old mines are abandoned, but the workings are used for haulage and ventilating purposes, making it very difficult to manage successfully. I requested that a door be placed in the air course and some break-throughs closed, which would improve the ventilation. Edward Eckelbert was killed in this mine on September 13th, at the face of his working place by a fall of rock.

WEST BROOKFIELD NO. 2

Is situated near the village of West Brookfield, on a branch of the W. & L. E. R. R., and is owned by the Massillon Mining Co., Massillon, Ohio. R. W. Johns is superintendent, and J. E. English is mine boss. This mine is a shaft opening 150 feet in depth, entering the Massillon or No. 1 seam of coal, which is here five feet in thickness. The double entry system is in use, and ventilated by exhaust steam. It was visited three times during the year. Fourteen miners are employed. My first visit was made to the mine for the purpose of investigating the causes resulting in the death of Christian Held, who met his death by a fall of rock on July 12th. Howard Bullock was also injured in the same accident.

WEST MASSILLON NO. 3

Is located near North Lawrence, Ohio, on the P. Ft. W. & C. R. R., and is owned by E. G. Krause Coal Co., Cleveland, Ohio. C. R. Klien is both superintendent and mine boss. The opening is a shaft 40 feet deep penetrating the Massillon or No. 1 seam of coal, which is five feet thick at this point. The double entry system is in use with fan ventilation. Thirty miners and seventeen day hands are employed at this mine. It is operated in accordance with standard as set forth in the Mining Laws of the Department.

STANWOOD NO. 4

Is situated near Stanwood, on a branch of the C. L. & W. R. R., and is owned by the Krause Coal Co., Cleveland, Ohio. Henry Leahy, Massillon, Ohio, has entire supervision. This is a shaft opening 200 feet deep penetrating the Massillon or No. 1 seam of coal, which is six feet in thickness at this point. It is worked on the double entry system, and is ventilated by a fan. On my first visit I found fifty miners employed and fourteen day hands, and an electric plant in the course of construction. On my second visit the plant was completed, and the machines placed in the mine. There were thirty-six machine miners and twenty pick men. The scales were tested and found them weighing accurately. This mine is in good condition. The electric machines in use at this mine are of the Link Belt Electric Chain Breast type.

ELM RUN NO. 3

Is located near the village of Elton, on the W. & L. E. R. R., and is owned by the Elm Run Coal Co., Massillon, Ohio. James Wilson, Massillon, Ohio, is superintendent, and Wm. Penman, Elton, Ohio, is mine boss. The opening is a shaft 156 feet deep penetrating the Massillon seam of coal, being five feet in thickness at this point. The mine is worked on the double entry system, and is ventilated by a fan. Twenty-eight miners and eight day hands are employed. This mine was visited twice during the year and found in good condition. The scales were tested and found weighing correctly.

ELM RUN NO. 4

Is located at Elm Run, Ohio, on the W. & L. E. R. R., and is owned by the Elm Run Coal Co., Massillon, Ohio. Wm. Penman is superintendent, and Edward Penman, Elton, Ohio, is mine boss. It is a shaft opening 112 feet deep into the Massillon vein of coal, which is here five feet in thickness. The double entry system is in use with fan ventilation. Twenty-six miners and fourteen day hands find employment here. The mine received two visits and found in fair condition.

WOODLAND

Is situated about two miles south of East Greenville, Ohio, and is owned by the Massillon-Cleveland Coal Co., Cleveland, Ohio. D. R. Jones, East Greenville, Ohio, is both superintendent and mine boss. The opening is a shaft 250 feet in depth to the Massillon seam of coal, being five feet thick at this point. The double entry system is used, and the mine is ventilated by means of a fan. Fifty-nine miners and twenty day hands are employed. The ventilation of the mine was good with the exception of a stone entry entering a new basin of coal, and the necessary improvements were being made as rapidly as possible to improve the ventilation in that portion of the mine.

NEW GREENVILLE

Is situated near East Greenville, Ohio, on a branch of the W. & L. E. R. R., and is owned by the Howells Mining Co., Massillon, Ohio. W. J. James is superintendent, and Matthew English, Massillon, Ohio, is mine boss. This is a shaft opening 260 feet deep, penetrating the Massillon seam of coal to a depth of five feet. It is worked on the double entry plan, and a fan is the ventilating power. Eighty miners and twenty-eight day men are employed. This mine was visited twice during the year and found that the requirements of the law had been complied with in every respect.

SUMMIT HILL

Is located near the village of Greentown, Ohio, on the Valley R. R., and is owned by L. E. Smith, Greentown, Ohio, who is also superintendent, with Peter Dearoff, Greentown, Ohio, as mine boss. This mine is a drift opening entering the No. 4 or Limestone seam of coal, which is here six feet thick, and includes a strata in the center. It is worked on the single entry plan, and a furnace is the mode of ventilation. The number of miners employed is eighteen and day hands five. I made two visits to this mine, and on my first found it in an unsatisfactory condition. Orders were given for certain repairs to be made, and on my return found that my requests had been complied with and the mine in a satisfactory condition.

DRAKE

Is located near Newman, Ohio, on a branch of the Pittsburg, Ft. Wayne & Chicago R. R., and is owned by the Drake Coal Co., Cleveland, Ohio. E. E. Fox, Massillon, Ohio, is the superintendent, and F. J. Kellar, of the same place, is mine boss. This is a shaft opening into the Massillon seam of coal 170 feet deep. The coal at this point is five feet in thickness. The double entry system is in use with fan ventilation. Two visits were made to this mine, and it was found in good condition. It will soon be abandoned as it is all pillar work. The scales were also tested and found them weighing accurately.

WILLOW SPRINGS

Is located near North Industry, on the C. T. & V. R. R., and is owned by Ridgeway, Burton & Co., Massillon, Ohio. J. P. Burton, of the same place is superintendent, and A. Lindsay, North Industry, Ohio, is mine boss. This mine is a drift penetrating the No. 6 seam of coal to a depth of four feet. It is worked on the double entry system, and has natural ventilation. Ten miners and two day hands are employed, drawing pillars. This mine will soon be abandoned.

FAILOR

Is situated near North Industry, on the C. T. & V. R. R., and is owned by Ridgeway, Burton & Co., Massillon, Ohio. It is managed and operated by the same parties as the Willow Spring, with the exception that a furnace is used as the ventilating power. Seven miners and six day hands are employed. This mine is nearly exhausted.

INDIAN RUN

Is located near Osnaburgh, on a branch of the W. & L. E. R. R., and is owned by Stiner & Tressell Coal Co., Canton, Ohio. John Zuber, Osnaburgh, Ohio, has full charge. This is a new mine, opening into the No. 6 seam of coal, which is here three feet in thickness. It is worked on the

double entry system, and a furnace is the mode of ventilation. Thirteen miners and four others find employment here. This mine is intended to develop a large basin of coal.

MCGINTY

Is located near Louisville, on the Ft. Wayne R. R., and is owned by the Brumbach & Kime Co., Louisville, Ohio. Oliver Brumbach, of the same place, is superintendent, and Jacob Lorah is mine boss. This is a drift opening into the No. 6 seam of coal, being three feet thick at this point. The single entry system is in use with furnace ventilation. Seventeen miners and five others are employed here. Two visits were made to this mine and the ventilation was found to be in a poor condition. The break-throughs were ordered closed and two doors put up for the purpose of changing the current of air. On my second visit the mine was idle.

STARK

Is located two miles south of Massillon, on a branch of the W. & L. R. R., and is owned by the Stark Coal Co., Canton, Ohio. J. L. Green is superintendent, and M. Davis, of the same place, is mine boss. This is a new shaft mine 190 feet deep, penetrating the Massillon seam of coal, which is here four feet in thickness. The double entry system is in use, and the mode of ventilation is exhaust steam. Twelve miners were engaged in making bottom, also five day hands. Two visits were made to this mine, and on my last visit was found idle.

MASSILLON STANDARD

Is situated near Navarre, Ohio, and is owned by Fred Hess, Massillon, Ohio, who is also superintendent, with George Ray, Navarre, Ohio, acting as mine boss. It is a shaft opening 30 feet deep, penetrating the Massillon seam of coal to a depth of three and one-half feet. It is worked on the double entry system, and exhaust steam is used for ventilation purposes. Six miners and one day hand are employed. This mine has been visited twice and will soon be exhausted.

CENTRAL

Is located about two miles south of Brookfield, on the W. & L. E. R. R., and is owned by the Central Coal Co., Massillon, Ohio. Philip Schalter is superintendent, whose postoffice address is Massillon, Ohio. J. Moore, of the same place, is mine boss. The opening is a shaft 25 feet in depth opening into the Massillon seam of coal, which is five feet in thickness at this point. It is worked on the double entry system, and is ventilated by means of a fan. Forty-five miners and fifteen others find employment here. Three visits were made to this mine during the year. On my first visit I found that some of the break-throughs were leaking air, and requested a number of them closed. On my second visit

I found that my requests had been complied with, which greatly improved the ventilation. My last visit was made for the purpose of testing the scales at the request of the Mine Committee, and after testing same found them weighing incorrectly. After considerable trouble the scale was properly adjusted. The safety catches were also examined and found them in good working order.

YOUNGS SHAFT

Is situated near East Greenville, Ohio, on the W. & L. E. R. R., and is owned by the Pocock Coal Co., Massillon, Ohio. Chris A. Kouth, Massillon, Ohio, has entire supervision. It is a shaft opening 240 feet deep entering the Massillon seam of coal, which is five feet thick at this point. It is conducted on the double entry system and is ventilated by means of a fan. One hundred and twenty-two miners and thirty-four day hands are employed. Two visits were made to this mine, and it meets with the requirements of the law.

TALLY HO

Is located near North-Lawrence, Ohio, on a branch of the C. A. & C. R. R., and is owned by the Fox Lake Coal Co., Cleveland, Ohio. John Featherstone, North Lawrence, Ohio, has entire charge. It is a new shaft opening into the Massillon seam of coal, being four and one-half feet in thickness at this point. This mine is forty-seven feet deep, worked on the double entry system, and is ventilated by exhaust steam. Seven miners and five day men are employed here. Two visits were made to this mine during the year. This is an up-to-date plant in every respect.

PLEASANT VALLEY

Is located near the village of Paris, on the Ohio River Railroad, and is owned by the Pleasant Valley Coal Co., Alliance, Ohio. J. Livingston, Paris, Ohio, is mine boss. It is a slope opening, penetrating the No. 5 seam of coal, which at this point is three feet in thickness. It is conducted on the single entry system, and is ventilated by means of a fan. Ten miners and four day hands are employed. This mine was visited once during the year. The conditions here are poor. Some changes were ordered, viz: a stack on the air shaft, the air courses cleaned and break-throughs closed.

HERNBROOK

Was worked out and abandoned the latter part of the year.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Camp	Drift	H. B. Camp (clay mine)	7	Inland.
Camp	"	H. B. Camp (coal).....	5	"
Smith	"	A. Smith	3	New Berlin.
Holl	Shaft	M. Holl	4	Aultman.
Stoner	Drift	J. L. Stoner.....	2	New Berlin.
Davis	Shaft	D. Davis	3	Alliance.
Carr	"	A. M. Carr	5	"
Battershall	"	Frank Karper	4	"
Lowe	"	Thos. Lowe	6	"
Creston	Slope	J. J. Robertson.....	6	"
Sippo	Drift	J. Warthoust (clay mine)	5	Massillon.
Whippoorwill	"	P. Smith & Eberhardt..	2	"
Hipp	"	Massillon S. & F. B. Co.	7	"
Fox Run	Slope	Simmons & Waltzer....	3	Canal Fultor
Kagey	Shaft	J. B. Kagey (clay mine)	4	Louisville.

Lake Erie No. 1 mine was visited and found idle.

WAYNE COUNTY.

BILLMAN

Is located near Doylestown, Ohio, on a branch of the Erie Railroad. It is owned by the Akron & Card Coal Co., Akron, Ohio. J. M. Card, Akron, Ohio, is superintendent, and Wm. Lidy, Hametown, Ohio, is mine boss. This is a slope opening penetrating the Massillon seam of coal, which is four feet in thickness at this point. It is conducted on the double entry system, and exhaust steam is the ventilating system. Forty-eight miners and five day hands are employed. I was called to this mine to test the scales and found them correct. On my second visit it was found in fair condition. By request of the miners I again tested the scales and found them correct.

WAYNE

Is situated on a branch of the Erie Railroad, near Doylestown, Ohio, and is owned and operated by the Ohio Salt Co., Wadsworth, Ohio. V. Dibble, Wadsworth, Ohio, is superintendent, and Thomas Evans, the same place, is mine boss. It is a slope opening entering the Massillon seam of coal, being three and one-half feet in thickness at this point. It is worked on the double entry plan, and is ventilated by exhaust steam. Twenty-seven miners and four day men find employment here. The mine was found in poor condition, and a number of air shafts were ordered closed, which was agreed to by the manager.

MOBILE

ed near Doylestown, Ohio, and is owned by W. P. Ries, Doylestown, Ohio, who has the entire supervision of this mine. It is a drift into the Massillon seam of coal, and four feet thick at this place. A single entry system is in use with furnace ventilation. Ten miners and day men are employed. This is a retail mine, and was found in good condition.

WEST LEBANON MINING CO. NO. 1

ed near West Lebanon, on a branch of the C. A. & C. R. R., owned by the West Lebanon Coal Co., Wooster, Ohio. John Jorassillon, Ohio, is general manager. This is a new shaft 100 feet penetrating the Massillon seam of coal, which at this point is five feet thick. It is worked on the double entry system, and is vented by exhaust steam. Twelve miners and seven day hands find employment.

MINES EMPLOYING LESS THAN TEN MEN.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Doylestown	Drift	John Santrock Seiberling & Miller	3	Doylestown.

MINES EMPLOYING LESS THAN TEN MEN.

HOLMES COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	Number of Men.	P. O. Address.
Doylestown	Drift	John Horn	3	Millersburg.
Doylestown	"	John Chevellard	1	"
Doylestown	"	Daniel Builderback	5	"
Doylestown	"	G. C. Quillan	3	Killbuck.
Doylestown	"	N. J. Beighey	4	Millersburg.
Doylestown	"	Adolph Eckert	2	"
Doylestown	"	W. H. Gindlesbergher	3	"

CONCERNING OIL AND GAS WELLS.

There has been no new coal veins developed by drilling for oil or gas knowledge.

COAL MINES.

LIST OF MINES EMPLOYING MORE THAN TEN MEN.

ATHENS COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Carbondale No. 2.....	Drift	Carbondale Coal Co.....	Carbondale.
Carbondale No. 3.....	"	"	"
Phoenix No. 2.....	Shaft	Phoenix Coal Co.....	Chicago.
Jacksonville No. 4.....	"	W. P. Rend & Co.....	"
Briar Ridge No. 6.....	"	"	"
No. 10.....	"	Sunday Creek Coal Co.....	Columbus.
No. 10 X.....	Slope	"	"
No. 16.....	Shaft	Courtright Coal Co.....	"
Bell Run No. 55.....	Drift	Maple Hill Coal Co.....	Nelsonville.
Briar Hill.....	"	York Clay Mining Co.....	"
No. 3.....	"	"	"
No. 29.....	"	Wilson Coal Co.....	"
West Floodwood.....	"	Silcot Coal Co.....	"
No. 21.....	Shaft	Northern Fuel Co.....	Jacksonville
Broadwell.....	Drift	O. Brent Guard.....	Marietta.
Federal Valley No. 1.....	"	C. M. Clark.....	Glouster.
Federal Valley No. 2.....	"	Marietta Run Coal & Coke Co.....	New York.
Sedalia.....	"	Sedalia Coal Co.....	Glouster.
Jumbo.....	Shaft	North Star Coal Co.....	Columbus.
Minker Run.....	Drift	Hocking Valley Coal Co....	"
Black Diamond.....	"	Black Diamond Coal & Coke Co.....	"
Daleton No. 1.....	Shaft	Luhrig Coal Co.....	Cincinnati.
Daleton No. 2.....	"	"	"
Halbert.....	Drift	Shafer Coal Co.....	Nelsonville.
Wells.....	"	A. H. Wells.....	"
Elm Rock.....	"	Price & Patton.....	"
Brooks Hill.....	"	Vinton Coal Co.....	Coalton.
Somers No. 1.....	"	Somers Coal Co.....	Columbus.
Somers No. 2.....	Slope	"	"
Somers No. 3.....	Drift	"	"
Somers No. 4.....	"	"	"
Somers No. 5.....	"	"	"
Doanville No. 1.....	Slope	C. & H. C. & I. Co.....	"
Doanville No. 2.....	"	"	"
Doanville No. 3.....	"	"	"
Big Run.....	"	C. A. Nice.....	Big Run.
Greendale New.....	"	Greendale Furnace Co.....	Columbus.
Rara Avis.....	Shaft	Slater & Poston.....	Chauncey.
Buchtel No. 4.....	Drift	New Pittsburg Coal Co.....	Columbus.
Jobs No. 19.....	Slope	Win. Job Coal Co.....	Glouster.
Jobs No. 23.....	"	"	"

MINES EMPLOYING LESS THAN TEN MEN.

ATHENS COUNTY.

Name of Owner or Operator.	P. O. Address.
Louis Wetzel	Buchtel.
J. F. Schuler	Sharpsburgh.
R. C. M. Hastings	Chauncey.
James Martin	Broadwell.
Oliver Lucas	"
A. Mielmier	Sharpsburgh.
George Love	Jacksonville.
Vernon Patch	"
Wm. Gallagher	Buchtel.
J. M. Lama	Nelsonville.
George Adamson	"
East Clayton Clay Manufacturing Co.	"

MINES EMPLOYING MORE THAN TEN MEN.

BELMONT COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Wheeling Creek No. 1.	Drift	Lorain Coal & Dock Co.	Cleveland.
Crescent No. 1.	"	"	"
Aetna Standard	"	National Steel Co.	New York City.
McConaughy	"	James McConaughy.	Bridgeport.
Nail Mill	"	Bellaire Steel Co.	Bellaire.
Schicks	"	Schick & Son.	"
Belmont No. 1.	"	Long Bros	"
Belmont No. 2.	"	The Rose & Morgan Co.	"
Pittsburg	Slope	Pittsburg-Ohio Coal Co.	Pittsburg.
Morgan	Drift	G. E. Morgan.	Bellaire.
Maple Hill	"	Maple Hill Coal Co.	Barton.
Boggs No. 2.	"	E. N. Boggs.	"
Taggarts	"	"	"
Flushing	"	Flushing Coal Co.	Elyria.
Black Diamond	"	G. Trolls' Sons.	St. Clairsville.
Laughlin	"	Laughlin Nail Co.	Martins Ferry.
Captina	Shaft	Captina Coal Co.	Armstrongs Mills.
Kidds No. 2.	Drift	Alex Neff	Steele.
Franklin	"	Owen Meehan	Stewartsville.
Quaker City	Slope	Cochran & Co.	Quaker City.
Gaylord	Drift	Pitts. & Clev. Coal Co.	Martins Ferry.
Glen	Slope	Johnson Bros. Coal Co.	Glenco.
O. & W. Va.	Drift	O. & W. Va. Coal Co.	St. Clairsville.
Wegee	Slope	Wegee Coal Co.	Ambler.
Echo	Drift	Troll Bros	St. Clairsville.
Kennon No. 2.	"	Kennon Coal Co.	Cleveland.
Tin Plate	"	American Tin Plate Co.	Martins Ferry.

MINES EMPLOYING LESS THAN TEN MEN.

BELMONT COUNTY.

Name of Owner or Operator.	P. O. Address.
John Musgrave	Bellaire.
Israel Pelkey	"
Bridgeport Electric Light & Power Co.	Bridgeport.
Lewis Hellings	Martins Ferry.
Davis & Ice	Bellaire.
J. J. Koehnline & Son	Bridgeport.
John T. Conway	Martins Ferry.
John Bohill	Klee.
George Flato	Martins Ferry.
Wm. Hepburn	Morning View.
Henry Deihl	Don.
Alvin Thornton	Martins Ferry.
Meister Bros	Bridgeport.
David Boston	"
Isaiah Owens	Powhatan.
S. Fielding	"
John E. Schnegg	"
Richard Davy	Barnesville.
John E. Klee	Klee.
Henry Lewis	Martins Ferry.
Chas. Rosser	Bellaire.
Baker & Kennedy	Klee.
John G. Reline	St. Clairsville.
Renker Bros	"
D. K. Allen	Martins Ferry.
J. W. Goldsmith	Barton.
J. D. Wilson	Bridgeport.
Jno. R. Crozier	Bellaire.
Charley Davey	Barnesville.
Robert Clark	Stewartsville.
George Neff	Neffs.
D. R. Humphrey	Flushing.
Able Walker	"
A. Conrow	"
J. Carlton Howell	"
W. L. Stolter	Barnesville.
Wm. Seabright	Martins Ferry.

MINES EMPLOYING MORE THAN TEN MEN.

CARROLL COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Beatty No. 2.....	Drift	Beatty Fire Clay Co.....	Magnolia.
Malvern	"	Malvern Fire Clay Co.....	Malvern.
Magnolia	Shaft	Magnolia Coal Co.....	Magnolia.
Davis No. 6.....	Drift	H. S. Odbert.....	Cleveland.
Scotts No. 3.....	"	Mardy Coal & Mining Co...	Tabor.
Elder	"	J. D. Owen Mining Co.....	Canton.
Linden No. 1.....	"	Davis Railway Coal Co.....	"
Linden No. 2 New....	"	"	"
Linden No. 6.....	"	"	"

MINES EMPLOYING LESS THAN TEN MEN.

CARROLL COUNTY.

Name of Owner or Operator.	P. O. Address.
The Canton & Malvern Fire Clay Co.....	Malvern.
Jno. E. Ebersole.....	Carrollton.
G. C. McCreary.....	Leesville.
Sylvester Scott	Algonquin.
Samuel C. Sharp.....	Sherrodsville.
Abraham Richardson, Jr.....	"
Warner & Baker.....	New Hagerstown.
Conrad Peach	Sherrodsville.
Thos. Gatschall	Harlem Springs.
Jas. P. Brandon.....	"
Ezra Thompson	"
Oliver S. Gatschall.....	"

MINES EMPLOYING MORE THAN TEN MEN.

COLUMBIANA COUNTY.

Name of Mine.	Kind of Opening	Name of Owner or Operator.	P. O.
Anderson	Drift	Heatherington Bros	Salinev
Heatherington	"	"	"
Slope	Slope	O. & P. Coal Co.	Clevla
Hayes	Drift	James Strabley	Salinev
Cedar Hill	"	Cedar Hill Coal Co.	Clevla
New Shaft	Shaft	Big Vein Coal Co.	"
Fosters	Drift	Morrison Foster	Shields
Prospect Slope No. 2..	Slope	Prospect Hill Coal Co.	East P.
Pleasant Valley No. 1.	Drift	Powers Mining Co.	Negley.
Pleasant Valley No. 2.	"	"	"
Wheat Hill	"	Wheat Hill Coal Co.	East P.
Cherry Valley No. 3...	Slope	Cherry Valley Iron Works..	Leetoni
Cherry Valley No. 4...	"	"	"
First National	Drift	Wm. Stone	Salem.
Quaker Valley	"	Sterling Mining Co.	Rogers.
Cement	"	Ohio Cement Co.	Lisbon.
Card & Prosser	"	Card & Prosser Coal Co.	"
Folts	Shaft	"	"
Salem	Drift	Salem Coal Co.	Salem.
Pine Hollow	"	James Ashman	"
Fairfield No. 2	"	Fairfield Mining Co.	New V
Oak Hill	"	Oak Hill Coal Co.	Clevla
State Line Slope	Slope	James Mullens	Wooste
Lincoln	Shaft	Columbiana Coal Co.	East P.
Haysville	Drift	W. J. Rainey Coal Co.	Clevla
State Line No. 3	"	James Mullens	Wooste
Dewey No. 2	"	Herriot Coal Co.	Elkton.
Manila	"	Manila Coal Co.	East P.
Lisbon	"	Lisbon Coal Co.	Clevla

MINES EMPLOYING LESS THAN TEN MEN.

COLUMBIANA COUNTY.

Name of Owner or Operator.	P. O. Address.
John Meehan	Lucerne.
John D. Smith	Washingtonville.
C. E. Cobb	Beloit.
T. F. Fryfogel & Frank Drake	"
Ohio Sewer Pipe Co.	Lisbon.
John Wilson	"
John Woster	Wellsville.
Anderson Coal Co.	Lisbon.
George Swearingen	Wellsville.
Alan W. Tweed	Unity.
Irving Mellinger	Salem.
McBrade & Dickinson	"
Charles March	Calcutta.
Kirk & Vasey	Salineville.
C. W. Barrett	Calcutta.
Ludwig Frenger	New Waterford.
Jonathan Mollenkoph	Unity.
E. J. Renkenberger	East Fairfield.
Zeph. Aspey	New Chambersburg.
G. McQuiston	East Fairfield.
George Baker	Washingtonville.
Wm. McDonald	Leetonia.
J. H. Smith	Linton.
J. C. Shepard	Salem.
Elizabeth Neihsel	Leetonia.
Thomas J. Myers	"
Standard Pottery Co.	Salineville.
Jos. Whittaker	Inland.
Andrew Roley	Wellsville.
O. S. Hill	Lisbon.
Peter Allison	Calcutta.

MINES EMPLOYING MORE THAN TEN MEN.

COSHOCKTON COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Morgan Run No. 3...	Drift	Morgan Run Coal Co.....	Cleveland.
Franklin No. 1.....	"	Columbus Coal & Mining Co.	Franklin St.
Franklin No. 2.....	"	George Hall	"
Conesville No. 2.....	"	David Davis	Conesville.
Conesville No. 3 New.	"	"	"
Conesville No. 4.....	"	"	"
Conesville No. 5.....	"	"	"
Conley No. 2.....	"	Wade Coal Co.....	Cleveland.
Hay No. 1.....	"	Joseph H. Robson.....	Coshocton.
Hay No. 2.....	"	Williams & Son.....	"
Cassingham	"	Coshocton Coal Co.....	"
Hudson No. 1.....	"	George Cassingham	"
Wade No. 1.....	"	Wade Coal Co.....	Cleveland.
Wade No. 2.....	"	"	"
Flint Hill	"	Henry Lear	Coshocton.

MINES EMPLOYING LESS THAN TEN MEN.

COSHOCKTON COUNTY.

Name of Owner or Operator.	P. O. Address.
Seth Poland	Isletta.
C. F. Tumblin.....	Wills Creek.
Wells & Robson.....	Coshocton.
Dan Hudson	"
Chas. West	"
Pinkney Cannel Coal Co.....	Cleveland.
Thos. Lear & Sons.....	Coshocton.
Benj. C. Williams.....	West Lafayette.
James H. Gillen.....	Roscoe.

MINES EMPLOYING MORE THAN TEN MEN.

GALLIA COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Carl No. 1..... Carl No. 2.....	Drift "	E. L. Carl.....	Carlton. "

MINES EMPLOYING LESS THAN TEN MEN.

GALLIA COUNTY.

Name of Owner or Operator.	P. O. Address.
W. S. Small..... M. D. Wilkinson..... Raccoon Coal & Fuel Co..... D. D. Morgan..... Thomas E. Evans.....	Bladen. " Gallipolis. Thurman. "

MINES EMPLOYING MORE THAN TEN MEN.

GUERNSEY COUNTY.

Name of Mine.	Kind of Opening	Name of Owner or Operator.	P. O. Address
Ideal	Shaft	Wills Creek Coal Co.....	Detroit, Mich.
Champion	"	" " " "	"
Walhounding	"	" " " "	"
Nicholson	Drift	Ohio Coal Co.....	Cambridge.
Guernsey	"	Ohio and N. Western C. & M. Co	"
Hartford	Shaft	J. W. Ellsworth & Co.....	Cleveland.
Trail Run	"	" " " "	"
Pioneer	Slope	Ellsworth Coal Co.....	"
Forsythe	"	Forsythe Coal Co.....	Danford
Cisco	Shaft	Opperman Coal Co.....	Cambridge.
Robins	"	Morris & Guild Coal Co....	"
Old Orchard	"	" " " "	"
Imperial	"	Hamilton Mining Co.....	"
Klondike	Slope	Loomis, Moss Coal Co.....	Lore City.
C C C	"	Ohio & N. Western C. M. Co.	Cambridge.
Little Kate	Shaft	National Coal Co.....	Akron.
Black Top	"	Monarch Mining Co.....	"
Indian Camp	Drift	Indian Camp Coal Co.....	Coshocton.

MINES EMPLOYING LESS THAN TEN MEN.

GUERNSEY COUNTY.

Name of Owner or Operator.	P. O. Address
Thornton Eichekberger	Danford.
Jones & Taylor, Lessees.....	Craig.
D. W. Nicholson.....	Cambridge.
James Hupp	Kimbolton.
John Holbrook	Byesville.
James Burris	Craig.
M. A. Greist	Quaker City.
E. F. Barton.....	"
Samuel Sayers	"
Post Boy Coal Co.....	Cambridge.
M. K. Sarchet.....	"
J. R. Bate.....	Quaker City.
James Likes	"
E. H. Webster.....	"

MINES EMPLOYING MORE THAN TEN MEN.

HARRISON COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Clover Leaf	Drift	Clover Leaf Coal Co.	Canton.
Tippecanoe		Tippecanoe Coal Co.	Cleveland.

MINES EMPLOYING LESS THAN TEN MEN.

HARRISON COUNTY.

Name of Owner or Operator.	P. O. Address.
Ross Hedges	Cadiz.
R. R. Cochran	"
J. W. Rife & Geo. A. Martin	"
Elizabeth J. Mitchell	"
S. C. Clemens	"
John Campbell	"
James H. Patterson	"
Robert Long	"
W. B. Croskey	"
A. J. Evans	Freeport.
L. C. Mallernee	Hattonia.
Robert Penman	Tappan.
G. W. Czatt	"
J. L. Kane	Cadiz.
George Thompson	"
W. H. Martin	"
Wm. Sheets	"
J. C. Jamison	"
A. Tipton	Hattonia.
R. F. Ramsey	"
E. C. Rogers	Moraville.
John Keesy	"
C. O. Heida	Leesville.
F. W. Weyandt	"
D. F. Hess	Freeport.
Wm. Tennent	"
W. C. Hatch	Tappan.
Frank B. Stevens	Tippecanoe.
Henry Copeland	Folks Station.
Wesley Mattern	"
Wm. Hanna	"
A. A. Cook	Hopedale.
Addison Leas	Means.
George Aukerman	Science Hill.
Theodore W. Liggett	Hopedale.

MINES EMPLOYING LESS THAN TEN MEN — Concluded.

HARRISON COUNTY — Concluded.

Name of Owner or Operator.	P. O. Ad
J. B. White.....	Jewett.
Elmer Hines	"
O. C. Hines.....	"
Morris Hoobler	Germano.
C. B. Best.....	"
Jesse Cecil	Stillwater.
Jacob McQuery	Hopedale.
A. A. Cannon.....	New Athen
R. M. Love.....	"
S. A. Webb.....	"
F. S. & C. G. Culberson.....	"
W. R. Crimm, Sr.....	"
M. A. Grimes.....	"
David Allison Heirs.....	Hopedale.
Thomas Young	"
James D. Mitchell.....	Warfel.
S. Mull & Son.....	Germano.

MINES EMPLOYING MORE THAN TEN MEN.

HOCKING COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Ad
New Pittsburg No. 1..	Drift	New Pittsburg Coal Co.....	Columbus.
New Pittsburg No. 2..	"	" " "	"
New Pittsburg No. 3	"	" " "	"
or Consul	"	" " "	"
New Pittsburg No. 6..	"	" " "	"
New Pittsburg No. 7..	"	" " "	"
Morris No. 2.....	"	Buckeye Coal & Railway Co.	"
Morris No. 3.....	"	" " "	"
Sand Run New.....	"	" " "	"
Lost Run or No. 4....	"	" " "	"
No. 29	Slope	Greendale Coal Mining Co..	"
Sycamore	Drift	Columbus Coal Co.....	"
Coalgate	"	Somers Coal Co.....	"
Snake Hollow	"	C. L. Poston & Co.....	Nelsonville
No. 15	"	Jacoby Coal Co.....	Sand Run.
Beattie Bros	"	Beattie Bros. Coal Co.....	Nelsonville

MINES EMPLOYING LESS THAN TEN MEN.

HOCKING COUNTY.

Name of Owner or Operator.	P. O. Address.
Washington Coakley	Nelsonville.
William Evans	Carbon Hill.
Ira Achauer	Haydenville.

MINES EMPLOYING LESS THAN TEN MEN.

HOLMES COUNTY.

Name of Owner or Operator.	P. O. Address.
D. M. Bilderback	Millersburgh.
A. Ackeret	"
N. J. Beighey	"
W. H. Gindlesberger	"
John Horn	"
G. C. Quillan	Killbuck.
J. Chevellard	Millersburgh.
Lewis G. Carrollin	"
E. B. Skelley	"
Redett & Sons	Fredericksburgh.
John Danwalter	Trail.

MINES EMPLOYING MORE THAN TEN MEN.

JACKSON COUNTY.

Name of Mine.	Kind of Opening	Name of Owner or Operator.	P. O. Address.
Superior No. 1.....	Shaft	Superior Coal Co.....	Wellston.
Superior No. 2.....	"	"	"
Superior No. 3.....	"	"	"
Superior No. 4.....	"	"	"
Superior No. 5.....	Drift	"	"
Superior No. 6.....	Slope	"	"
Superior No. 7.....	Shaft	"	"
Chapman	Drift	Chapman Coal Co.....	Jackson.
Grace	Shaft	"	"
Springfield	"	"	"
Wellston No. 3.....	"	Wellston Coal Co.....	Wellston.
Fluhart No. 1.....	"	Fluhart Coal Co.....	"
Fluhart No. 2.....	"	"	"
Fluhart No. 3.....	"	"	"
Hurd Shaft	"	Hurd Coal Co.....	Jackson.
Hurd Slope	Slope	"	"
Acorn Slope	"	Jones Coal Co.....	"
Jones No. 2.....	"	"	"
Price	Drift	Gosline & Barbour	Toledo.
No. 3	Slope	Northern Coal Co.....	Jackson.
Northern	Shaft	"	"
Eclipse	Drift	Eclipse Coal Co.....	"
Coalton No. 3.....	Slope	Coalton Coal Co.....	Coalton.
Ohio or Indiana.....	"	Ohio Coal Co.....	Jackson.
Emma	Shaft	Emma Coal Co.....	"
Emma New	"	"	"
Emma No. 3.....	Drift	"	"
Standard	Shaft	Standard Coal Co.....	"
Comet	"	Comet Coal Co.....	Wellston.
Globe No. 3.....	"	Globe Iron Co.....	Jackson.
Milton No. 1.....	"	Milton Coal Co.....	Wellston.
Milton No. 2.....	"	"	"
Milton No. 3.....	"	"	"
Buckeye No. 2.....	Drift	Buckeye Coal Co.....	Coalton.
Wainwright	Shaft	Wainwright Coal Co.....	Wellston.
Hippel	Slope	Hippel Coal Co.....	Coalton.
Alma	Shaft	Alma Coal Co.....	Glen Roy.
Victor No. 1.....	Drift	Victor Coal Co.....	Coalton.
Garfield New	"	Garfield Coal Co.....	"
Tom Corwin No. 1....	Shaft	Tom Corwin Coal Co.....	Dayton.
Tom Corwin No. 2....	"	Machine Coal Co.....	"
Jones Coal Co.....	Drift	Jones Coal Co.....	Oak Hill.
Oak Hill	"	Oak Hill F. B. Co.....	"
Davis of Oak Hill....	"	Thomas-Davis Coal Co....	"
Tom Rhodes	"	Coalton Coal Co.....	Coalton.
Star No. 4.....	"	Star Furnace Coal Co.....	Jackson.
Enterprise	Shaft	Enterprise Coal Co.....	"

MINES EMPLOYING LESS THAN TEN MEN.

JACKSON COUNTY.

Name of Owner or Operator.	P. O. Address.
st Coal Co.....	Glen Roy.
Coal & Iron Co.....	Wellston.
Coal Co.....	Coalton.
al & Lime Co.....	Gallia Furnace.
al Co.....	Oak Hill.
k Coal Co.....	Jackson.
Thompson.....	"
t Son.....	Coalton.
Collard.....	Jackson.
Dunfee.....	Coalton.
".....	Jackson.
nagle.....	"
cGinness.....	"
Trago.....	"
ylan.....	Coalton.
ulkner.....	Leach.
1 Byers.....	Leo.
Coal Co.....	Jackson.
omas.....	Oak Hill.
Davis.....	"
user.....	Chapman.
uduit & Co.....	Remple.
al Co.....	Jackson.
".....	"
Simpson.....	"
hambers.....	"
Evans.....	Thurman.
& Co.....	Olive Furnace.
Brown.....	Jackson.
oal Co.....	Esther.
S.....	Coalton.

MINES EMPLOYING MORE THAN TEN MEN.

JEFFERSON COUNTY.

of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Hill	Drift	O. & P. Coal Co.....	Cleveland.
3. 2.....	"	W. & L. E. Coal Co.....	Dillonvale.
n No. 1.....	"	"	"
lo. 1.....	"	"	"
lo. 2.....	"	"	"
ft	Shaft	Steubenville Coal & Mining Co	Steubenville.
ity	Drift	American Clay Mnfg. Co....	Toronto.
.....	Shaft	G. A. Laughlin.....	Wheeling, W. Va.

MINES EMPLOYING MORE THAN TEN MEN — Concluded.

JEFFERSON COUNTY — Concluded.

Name of Mine.	Kind of Opening	Name of Owner or Operator.	P. O. Address
Oak Grove	Drift	D. D. Miller.....	Mt. Pleasant, P
Rolling Mill No. 2....	Slope	Banfield & White.....	Irondale.
Rolling Mill No. 3....		"	"
Calumet	Drift	American Clay Mnfg. Co....	Calumet.
Diamond No. 2.....	"	W. E. Smith.....	Wellsville.
Diamond No. 3.....	"	"	"
McFadyen	"	McFadyen Coal Co.....	Carmen.
New Slope	Slope	D. D. Miller.....	Mt. Pleasant, P
Kelley No. 2.....	Drift	Kelley Coal Co.....	Portland Station
Great Western Coal...	"	American Clay Mnfg. Co....	Toronto.
Wilson	"	Bishop & Lee.....	Steubenville.
Bergholz	"	Yellow Creek Coal Co.....	Bergholz.
LaBelle	Shaft	La Belle Iron Co.....	Steubenville.

MINES EMPLOYING LESS THAN TEN MEN.

JEFFERSON COUNTY.

Name of Owner or Operator.	P. O. Address
W. A. Taylor & Sons.....	Bergholz.
R. S. Hill.....	Steubenville.
Louis Lipphardt	"
Adolph Pritschaw	Irondale.
John Nicholson & Son.....	Dillonvale.
Georges Run Coal Co.....	Brilliant.
Minor Fire Brick Co.....	Empire.
Joseph Van Kirk.....	Steubenville.
W. S. Tweed & Son.....	"
B. F. Owens.....	"
Excelsior Sewer Pipe Works.....	Calumet.
Stratton Bros	Empire.
A. C. Permar.....	Steubenville.
John Menton	Wintersville.
Lodge & Curfman.....	Steubenville.
H. Slater	"
D. O. Findlay.....	Costonia.
Samuel Carmen	Unionport.
Mrs. H. M. Ralston.....	Bloomingtondale.
Hicks & Jones.....	Fair Play.
Henry Cox	Smithfield.
A. G. Wolf.....	"
Frank Snyder	Mt. Pleasant.
J. C. Riley.....	Richmond.
Jos. Cooper	"
James McBane.....	Irondale.
J. W. McGarney.....	Wellsville.

MINES EMPLOYING MORE THAN TEN MEN.

LAWRENCE COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Stle	Drift	Hanging Rock Coal Co.	Hanging Rock.
.....	"	Kelley Nail & Iron Co.	Ironton.
.....	"	Belfont Iron Works Co.	"
Mill	"	Halley & Wright.	Vesuvius.
.....	"	J. F. Hall Co.	Campbell.
ve Ore.	"	Hanging Rock Iron Co.	Hanging Rock.
.....	"	Halley & Wells.	Pedro.
Bartells.	"	Peter Burke	Ort.

MINES EMPLOYING LESS THAN TEN MEN.

LAWRENCE COUNTY.

Name of Owner or Operator.	P. O. Address.
Shearer.	Ironton.
nd.	"
hur & Son.	"
Richey.	"
ins.	"
id.	"
stler.	"
ison, Sr.	"
ros.	Coal Grove.
Lane.	Ironton.
ay.	"
eed.	Forestdale.
in.	Coal Grove.
ce.	La Belle.
ohnson.	Miller.
ughes.	Culbertson.

MINES EMPLOYING MORE THAN TEN MEN.

MAHONING COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. A.
Stouffer	Shaft	Washingtonville Mining Co.	Washington
Fairview No. 3.....	Slope	Ohio Coal & Clay Co.....	"
Fairview No. 4.....	"	"	"
McKinley	Shaft	Ohio Brick & Coal Co.....	Beloit.
Crescent	Slope	Thos. B. Harris & Co.....	Rosemont
Ryder	Shaft	Chestnut Ridge Coal Co.....	Youngstown

MINES EMPLOYING LESS THAN TEN MEN.

MAHONING COUNTY.

Name of Owner or Operator..	P. O. A.
Allison & Bashaw.....	Salem.
H. A. Paulin.....	Poland.
Hemmingway & Dixon.....	Beloit.
G. F. Greenawalt.....	"
R. Urmsen	"
Chippis & Haggerty.....	"
Thos. Tyrell	Youngstown
J. C. Devine.....	Alliance.
John Howells	Salem.
Godward & Sons.....	"
Jos. Shriver	"
James Leeper	"
Robert Auld	"
Jones Bros	Poland.
McDonald Bros	North Lima
Buzzard & Wilderson.....	East Lewis
Jos. Leshner	"
George Pine	Columbia
Spait Coal Co.....	North Lima
S. S. & F. J. Mentzer.....	"
Jos. Roose	Alliance.
C. W. Holibaugh	North Lima
Robert Hunter	Youngstown
E. H. Ruhlman.....	Poland.
Ephraim Paulin	"
W. P. Clemson.....	Garfield.
John Kelley	Poland.
J. C. Sheppard.....	Salem.
Greenford Fire Clay Co.....	Greenford
E. H. Beardsley.....	Canfield.
Hiram Huxsaw	"

MINES EMPLOYING MORE THAN TEN MEN.

MEDINA COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Card Slope No. 3.....	Slope	Card Coal Co.....	Cleveland.
Akron No. 4.....	"	"	"
Klondike	"	Hutchinson Coal Co.....	Wadsworth.
Eureka	"	Card & Prosser Coal Co....	"
Wagoners	"	Excelsior Coal Co.....	Akron.
Easter	"	Silver Creek Coal Co.....	Doylestown.

MINES EMPLOYING LESS THAN TEN MEN.

MEDINA COUNTY.

Name of Owner or Operator.	P. O. Address.
James & Co.....	Wadsworth.
Ross A. Kline.....	"
Cunningham Coal Co.....	"
D. P. Davis.....	Western Star.
John G. Birkbeck & Sons.....	Wadsworth.

MINES EMPLOYING MORE THAN TEN MEN.

MEIGS COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Peacock	Drift	Peacock Coal Co.....	Pomeroy.
Coal Ridge	"	Coal Ridge Coal & Salt Co..	"
Charter Oak	"	Charter Oak Mining Co.....	"
Syracuse Shaft	Shaft	Syracuse Coal & Salt Co....	Syracuse.
Syracuse Slope	Slope	"	"
Minersville	Drift	Bear & Russell Coal Co.....	Minersville.
Rolling Mill No. 1....	"	Martin Ebersbach	Pomeroy.
King	"	Nash & Spray.....	Middleport.
Silver Run No. 2.....	"	W. C. Russell.....	"
Glendale	"	Kanawha Salt Co.....	"
Rolling Mill No. 2....	"	Martin Ebersbach	"
Buckeye Salt Co.....	"	Buckeye Salt Co.....	Pomeroy.

MINES EMPLOYING LESS THAN TEN MEN.

MEIGS COUNTY.

Name of Owner or Operator.	P. O. Address
Thompson Bros	Middleport.
Excelsior Salt Works.....	Pomeroy.
Dabney Mining Co.....	Middleport.
Wm. Fick	"
Wm. M. Burton.....	"
John J. Williams.....	Pomeroy.
Offler & Sons.....	"
S. D. Hogue.....	Rutland.
John C. Rupe.....	"
N. Bryne	"
W. J. Lanning.....	"
Jerry Smith, Jr.....	Bradbury.
Wm. Carr	Minersville.
Eli Roush & Sons.....	"
George Baer & Sons.....	"
Gottlieb Bentz	Pomeroy.
James M. Roush.....	"
John Hitchins	Minersville.
O. L. Bradford.....	Pomeroy.
J. W. Natross.....	Middleport.

MINES EMPLOYING MORE THAN TEN MEN.

MORGAN COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address
Rose	Drift	Carding Coal Co.....	Rose Farm.
Black Diamond	Slope	Rose Valley Coal Co.....	"

MINES EMPLOYING LESS THAN TEN MEN.

MONROE COUNTY.

Name of Owner or Operator.	P. O. Address
J. W. Bruce.....	Aitch.
Wm. Steele	Ozark.
George Coats	Woodsfield.
S. R. Carlton.....	Jerusalem.
Morris & Gates.....	Woodsfield.

MINES EMPLOYING MORE THAN TEN MEN.

MUSKINGUM COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Maynard	Drift	R. B. Mauk.....	Cannelville.
Cannelville	"	McNally Coal Co.....	Dillon.
Princess New	"	McCoy Coal Co.....	Zanesville.
East Hill	"	A. D. Morrison.....	Dillon.
Chestnut Valley	"	Michael Fisher	Zanesville.
Garrett	"	Joseph Garrett	Philo.
Blue Rock	Slope	Blue Rock Coal Co.....	Cedar Run.
Diamond No. 2.....	Drift	C. W. Joslin & Co.....	Zanesville.
Weller	"	W. H. Weller.....	"
Lehew	"	George M. Lehew.....	"
Harpers 3 Foot.....	"	Thos. Harper	"
Walnut Hill No. 2....	"	.....	"
Granger	"	Siler Coal Co.....	McConnelsville.

MINES EMPLOYING LESS THAN TEN MEN.

MUSKINGUM COUNTY.

Name of Owner or Operator.	P. O. Address.
Wm. E. Dick	Hopewell.
M. W. Campbell	"
Samuel Stuller	Dresden.
George Leyton	"
A. B. Mullen.....	Gilbert.
C. L. Ballou.....	Dillon.
John Jones	Frazeyburg.
W. A. Iles.....	Dillon.
Bernard E. Harper.....	Zanesville.
Philip Spaulding	Route 7, Zanesville.
Charles Harper	Zanesville.
Harry Greiner	"
Williams & Son.....	"
Andrew Melvin	"
J. W. Foutch.....	"
John Lutz	Wortley Station, Zanesville.
Joseph Miles	Wortley Station, Zanesville.
L. M. Plants.....	Philo.
Spinks & Fowler.....	Zanesville.
A. W. Smith.....	Box No. 46, Route No. 3, Zanesville.
Daniel Fletcher	Box No. 31, Route No. 3, Zanesville.
Deanis Matingly	Box No. 82, Route No. 3, Zanesville.

MINES EMPLOYING LESS THAN TEN MEN — Continued.

MUSKINGUM COUNTY — Continued.

Name of Owner or Operator.	P. O. Address.
John McNulty	Zanesville.
John German	"
Wm. L. Combs	3rd Ward Hose Hous Zanesville.
Samuel Niebel	Zanesville.
M. Bleakney	"
Dixon & Son	"
D. E. Henke	"
Robert Tumblin	"
Jacob Burrier	Box No. 77, Route N Zanesville.
James Bridwell	Zanesville.
J. A. Detenbeck	"
D. L. Hopkins	"
James Severance	"
G. W. Besser	"
Tarman & Bro.	Fazeysburg.
S. E. Alexander	Route No. 6, Zanesvill
McConnell & Cox	Dillon.
Noah F. Swank	Zanesville.
Charles A. Barton	No. 463 Greenwood Zanesville.
John Niebel	Zanesville.
Chas. L. Schultz	Zanesville.
Joseph Stiner	Ellis.
Jos. Jamison	Dresden.
John G. Baughman	Roseville.
C. C. Horner	Fazeysburg.
Ben Stoneburner	Roseville.
Anderson Snyder	Dresden.
Milton Griffin	"
H. F. Egbert	"
Edward Paegans	"
James Knight	Fazeysburg.
W. F. Trimble	Otsego.
Carson Bowden	Adams Mills.
Daniel Hock, Sr.	Philo.
John Harper & Son	Fazeysburg.
T. F. Billman	Dresden.
Henry Norman	Fazeysburg.
Zed Lindell	"
C. H. Bowden	Dresden.
T. J. Lockard, Jr.	Fazeysburg.
Alva Rider	Roseville.
Davies Coal Co.	Zanesville.
H. L. Culp	"
Spence & Allen	"
Abe Emery	"
William Temple, Sr.	Wortley Station, Zane
Arthur Potts	Zanesville.
Joseph W. Purcell	"
Isaac Melvin	Wortley Station, Zane
John Morgan	Zanesville.
George Harper	"
Frank G. Swope	"

MINES EMPLOYING LESS THAN TEN MEN — Concluded.

MUSKINGUM COUNTY — Concluded.

Name of Owner or Operator.	P. O. Address.
Fisher	Zanesville.
Bedding	Box No. 59, Route No. 4, Zanesville.
Trison	Hopewell.
Hock	Philo.
Wallace	Roseville.
Butler	Dresden.
Tr & Son	Norwich.
Trison	"
& Geyer	"
Ker	Otsego.
Bell, Jr.	"
Ker	"
Hamilton	"
Riney	"
Trison	Coaldale.
Trison	Tarsus.
Trison	Zanesville.
Trison, Sr.	"
Trison	White Cottage.
& Rambo	"
Trison	Roseville.
Trison B. & D. T. Co.	Axline.
Trison, Powell	Frazeyburg.
Trison Bros	Roseville.
Trison	Zanesville.
Cormick	Ellis.

MINES EMPLOYING MORE THAN TEN MEN.

NOBLE COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Trison	Shaft	Eastern Ohio Coal Co.	Cleveland.

MINES EMPLOYING LESS THAN TEN MEN.

NOBLE COUNTY.

Name of Owner or Operator.	P. O. Address.
James Sparling	Whigville.
James Donnelly	Sharon.
John Pickingpaugh	Hoskinville.
D. N. Baker	Berne.
B. T. Crum	"
Cooley Orr	"
Leisure & Nelson	Flag.
Washington Springer	"
G. S. Thompson	"
Mrs. Maggie Day	Berne.
Uriah Clarey	Summerfield.
F. H. Crawford	Whigville.
John A. Franklin	Flag.
Wm. B. Yonally	"
Hopkins & Morton	"
Theodore Love	Hoskinville.
Eli Stewart	Flag.
David Vance	"
John Daniels	Berne.
Jacob Shott	Summerfield.
W. W. McClintock	Mt. Ephriam.
S. J. McConnell	Stafford.
Fletcher Markey	Flag.
H. D. Miller	Mt. Ephriam.
Jos. Britton	Sarahsville.
J. E. Young	"
Wm. McWilliams	Everly.
M. D. Merry	"
Andrew Poling	"
Howard Anderson	Summerfield.
N. M. Meek	"
D. O. Young	Quaker City.
Harvey F. Lashley	"
Elijah Somers	Stafford.
W. H. Ullman	Ashton.
Theodore Boyd	Cumberland.
Haney Bros	"
George & John Early	"
H. C. Hunter	Flag.
I. R. Vance	"
D. R. Curtis	Stafford.
Hugh Robinson	Fulda.
Henry Miller	Caldwell.
C. I. McKee	Enoch.
S. M. Archer	

MINES EMPLOYING MORE THAN TEN MEN.

FERRY COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
No. 3	Drift	C. & H. & C. I. Co.....	Columbus.
No. 5		Troy Coal Co.....	New Straitsville.
No. 8	Shaft	Sunday Creek Coal Co.....	Columbus.
No. 21	Slope	"	"
Rends No. 3.....	Shaft	W. P. Rend & Co.....	Chicago, Ill.
Upson No. 1.....	Drift	Upson Coal Co.....	Shawnee.
Beach Grove No. 6....	"	H. J. Knoedler.....	Zanesville.
XX	"	Taylor, Williams & Jenkins.	Columbus.
Mingo	Shaft	Congo Mining Co.....	"
Congo No. 2.....	"	"	"
Iron Point No. 3.....	Drift	David F. Richards.....	Shawnee.
Lyonsdale Old	"	Maynard Bros	Columbus.
Lyonsdale New	"	Michael Meenan	Lyonsdale.
Lyonsdale No. 2.....	"	"	"
Manley or Furnace	"	"	"
No. 2	"	E. W. Lewis & Co.....	Shawnee.
Shawnee Valley	"	Maynard Bros	Columbus.
Hemlock or No. 20...	Slope	Franklin Fuel Co.....	"
Block or No. 2.....	Drift	Tague & Bennett.....	McLuney.
New Crescent	"	New Crescent Mining Co....	Roseville.
No. 37	"	Essex Coal Co.....	New Straitsville.
Spring Valley	Slope	Franklin Fuel Co.....	Columbus.
No. 13	Drift	"	"
Buckeye No. 5.....	"	Buckeye Coal & Railway Co.	"
Keystone No. 1.....	"	Zanesville Coal Co.....	Zanesville.
Union	"	Ohio Coal & Cement Co....	Columbus.
No. 11 or No. 139....	"	George Howe & Sons.....	New Straitsville.
Bristol No. 1.....	"	Bristol Coal Co.....	Newark.
Standard	"	Saltillo Coal Co.....	Redfield.
Chestnut Ridge No. 2.	"	A. P. Simons.....	"
Briar Hill	Slope	J. G. Underwood.....	Rose Farm.
Peacock	Shaft	Roberts & Davis.....	Hemlock.
No. 18	Slope	William Job Coal Co.....	Rendville.
Dew	Drift	Leyshon Coal Co.....	Burr Oak.
Chestnut Hill No. 3...	"	Jas. Coyle & Son.....	Redfield.
Tague Bros	"	Tague Bros	Crooksville.
Midway	"	Wallace Coal Co.....	Redfield.
Keystone No. 2 New..	"	Zanesville Coal Co.....	Zanesville.

MINES EMPLOYING LESS THAN TEN MEN.

PERRY COUNTY.

Name of Owner or Operator.	P. O. Add
Ambrose Gibbs	New Straits
Call, Hughes & Co.	"
Matthew Cox & Co.	"
Butler & Donnelly	"
Richard Johnson & Sons	"
Ohio Mining & Manufacturing Co.	Shawnee.
R. D. Brown	Rose Farm.
Crawford, Gaver Bros. & Co.	McCuneville.
John Butler	New Lexing
H. L. Irvin	"
George Parker	"
Harvey Robinson	McLuney.
A. J. Burley	Crooksville.
M. Wilson & Co.	New Straits
Long & Co.	"
W. J. Stewart & Co.	"
T. J. Davis	"
J. W. Stallsmith	Corning.
Jas. O'Donnell	New Straits
James Murphy	"
Alexander Coal Co.	"
John W. Bowman	Maxville.
Michael C. Carney & Sons	New Lexing
Thomas Greene	Somerset.
Jesse J. Greene	Junction Cit.
Lewis Greene	Somerset.
George Sanders	"
Lewis Flowers	"
N. E. Fink	"
Mark Smith	"
A. J. Yost	New Lexing
W. C. North	"
Brown & Sowers	Crooksville.
Thomas Phillips	Shawnee.
Wm. McCormick	Hancock.
J. D. Brown	"
Jerome Dumolt	Junction Cit.
John Bowman	Maxville.
George Danison, Sr.	"
George Howe	New Straits
John Bell	Hancock.

MINES EMPLOYING MORE THAN TEN MEN.

PORTAGE COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Hutson No. 2.	Shaft	Hutson Coal Co.	Cleveland.
Hutson No. 4.	"	"	"
Hutson No. 5.	"	"	"

MINES EMPLOYING MORE THAN TEN MEN.

SCIOTO COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Black Ore	Drift	Hanging Rock Coal Co.	Gervias.

MINES EMPLOYING LESS THAN TEN MEN.

SCIOTO COUNTY.

Name of Owner or Operator.	P. O. Address.
John Gifford	Wheelersburg.
Morgan & Horton	Eiforts.
M. E. Skelton	New Boston.
Isaac Benington	Lyra.
John Miller	"

MINES EMPLOYING MORE THAN TEN MEN.

STARK COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Indian Run	Drift	Indian Run Coal Co.....	Canton.
Stark	Shaft	Stark Coal Co.....	Massillon.
Willow Spring No. 2..	Drift	Ridgeway, Burton & Co....	"
South Massillon	Shaft	" "	"
North Massillon No. 2	"	" "	"
Failor	Drift	" "	"
New Greenville	Shaft	Howells Mining Co.....	"
Elm Run No. 3.....	"	Elm Run Coal Co.....	"
Elm Run No. 4.....	"	" "	"
McGinty	Drift	Louisville Brick & Tile Co..	Louisville.
Warwick No. 1.....	Shaft	Warwick Coal Co.....	Massillon.
Warwick No. 2.....	"	" "	"
Minglewood No. 4....	"	James Mullins	Wooster.
Singer or Shaft No. 3.	"	" "	"
Bookwalter Shaft No.	"	" "	"
2	"	" "	"
West Massillon No. 3.	"	E. G. Krause.....	Cleveland.
Summit Hill	Drift	L. E. Smith.....	Greentown.
Lake Erie No. 2.....	"	Monongahela or Lake Erie	
		Coal Co.....	Cleveland.
Davis	Shaft	Evan S. Davis.....	Alliance.
Fox Run	Slope	Block Vein Coal Co.....	Canton.
Pleasant Valley	Drift	Pleasant Valley Coal Co....	Alliance.
Wainwright or Wood-			
land	Shaft	Massillon-Cleveland Coal Co.	Massillon.
Eureka	"	" "	"
Stanwood	"	E. G. Krause Coal Co.....	Cleveland.
Central	"	Central Coal Co.....	Massillon.
Young Shaft	"	Pocock Coal Co.....	"
Massillon Standard ..	"	Massillon-Standard Coal Co.	Navarre.
Canton Stoneware	Drift	Canton Pottery Co.....	Canton.
Crystal Springs	Shaft	Crystal Springs Coal Co....	Massillon.
Drake	"	Drake Coal Co.....	Cleveland.
West Brookfield New..	"	Massillon Mining Co.....	Massillon.
Massillon Fire Brick..	Drift	Massillon Fire Brick & Tile	
		Co	"
Tally Ho	Shaft	Fox Lake Coal Co.....	Cleveland.

MINES EMPLOYING LESS THAN TEN MEN.

STARK COUNTY.

Name of Owner or Operator.	P. O. Address.
Heims	Waco.
s H. Yohe	"
ller, Kitzmiller & Sponseller	Canton.
uvenin	Waco.
toner	New Berlin.
& Kriegbaum	Marchand.
t Smith	New Berlin.
Rice	Osnaburg.
& Osnaburgh Brick & Tile Co.	"
Bolinger	"
Carr	Alliance.
Karper	"
end & Berry	Massillon.
nt Coal Co.	Alliance.
Lowe	"
s M. Harmon	Waco.
Bixby	"
d Snyder	"
Baum	Louisville.
Hill Coal Co.	Newman.
Plotner	Osnaburg.
E. Smith	"
ny Kramer	Waco.
ns & Walzer	Canal Fulton.
usser	Mapleton.
Sausser	Osnaburg.
in Bowen	"
f. Snyder	Waco.
Martin	Mapleton.
Daum	"
twright	Robertsville.
ice O. Meiser	Osnaburg.
ehmiller	North Industry.
Press Brick Co.	Canton.
an Warstler	"
Beasecker	New Berlin.
ommerville	New Franklin.
ah Hayman	Myers Station.
Slutz	Howenstine.
Minser	Waynesburgh.
Harsh	Minerva.
Bros	Paris.
ion Tile Works	Louisville.
Naysmith	Canton.

MINES EMPLOYING MORE THAN TEN MEN.

SUMMIT COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. A
Turkey Foot	Shaft	Brewster Coal Co.	Akron.
Fox Lake		Fox Lake Coal Co.	Cleveland.

MINES EMPLOYING LESS THAN TEN MEN.

SUMMIT COUNTY.

Name of Owner or Operator.	P. O. A
George A. Rex & Son.	Reservoir.
J. Whitticar	Inland.
Lewis John	Nimisila.
Lee & Collier Coal Co.	Barberton
H. Thomas & Co.	Cuyahoga
Thomas & Dodd.	Tallmadge
Hametown Coal Co.	Hametown
J. Watson & Sons.	Krumroy.
Frank T. Richard.	Western

MINES EMPLOYING MORE THAN TEN MEN.

TRUMBULL COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. A
Keel Ridge	Drift	Witch Hazel Coal Co.	Youngsto
Mazey	Slope	J. V. Rose.	Sharon, I
Applegate	Shaft	Witch Hazel Coal Co.	Youngsto

MINES EMPLOYING LESS THAN TEN MEN.

TRUMBULL COUNTY.

Name of Owner or Operator.	P. O. Address.
T. H. Lunn.....	Sharon, Pa.
Reese Edwards	Brookfield.
Ed. Jones	Coalburg.
Wm. Cotton & Son.....	Brookfield.
George Moore & Son.....	"

MINES EMPLOYING MORE THAN TEN MEN.

TUSCARAWAS COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Thompson Run East..	Drift	C. A. Somers & Co.....	Cleveland.
Thompson Run West..	"	"	"
Somerdale North	"	Somerdale Coal Co.....	Somerdale.
Somerdale West	"	"	"
Somerdale No. 2.....	"	"	"
Goshen No. 2.....	"	Goshen Coal Co.....	New Philadelphia.
Midvale No. 2.....	"	Midvale Goshen Mining Co.	Massillon.
Wainwright No. 4.....	"	"	"
Wainwright No. 5.....	Slope	"	"
Eagle Hill	Drift	Wm. R. Jones.....	Zoar Station.
Eagle Hill New.....	"	"	"
South Side	"	C. E. Holden.....	Mineral City.
Acme	"	G. J. Markley.....	"
Huffs Run	"	Ridgeway, Burton & Co...	Massillon.
Trenton	"	H. C. Minnich.....	Tuscarawas.
Tunnel No. 3.....	"	Tunnel Mining Co.....	Mineral City.
Mason	"	J. A. Horn.....	Canal Dover.
Morey Ridge	"	C. J. Nungesser.....	Beidler.
Maple Grove	"	Schindler Bros	Tuscarawas.
New Castle	"	New Castle Coal Co.....	New Philadelphia.
Buckhorn	"	Buckhorn Coal Co.....	Newcomerstown.
Houk	"	American Sheet Steel Co...	Canal Dover.
Massillon-Peacock	"	E. Van Kirk.....	Mineral City.
Twin City	"	Dennison Coal Co.....	Dennison.
Indian Hill	"	Seneca Coal Co.....	Fostoria.
Lobby	"	Lobby Coal Co.....	Mineral City.
Rock Cut	Slope	George J. Markley.....	"
Newport	Drift	Erhard Coal & Gas Co.....	Massillon.
Swan	"	Swan Coal Co.....	Canton.
Sugar Creek	"	Shanesville Coal Co.....	Shanesville.
East Goshen No. 1....	"	East Goshen Coal Co.....	Cleveland.
East Goshen No. 2....	"	"	"
Gordon	"	Gordon Coal Co.....	Massillon.

MINES EMPLOYING LESS THAN TEN MEN.

TUSCARAWAS COUNTY.

Name of Owner or Operator.	P. O. Address
J. Strong	Sandyville.
Royal Sewer Pipe & Fire Brick Co.	Akron.
B. Minnich	Tuscarawas.
Peter Hendricks	Newcomerstown
Winfield S. Skeels	Dennison.
Novelty Brick Co.	Newcomerstown
Adam Snyder	Canal Dover.
American Clay Works.	Uhrichsville.
F. W. Dawson	"
Crocker & Co.	"
David Dunlavey	"
C. R. Shipton	"
Advance Fire Clay Co.	"
John B. Wilcoxon	"
Joseph O. Scott	"
Joseph Shilling	Canal Dover.
Gustave Kienzle	Bolivar.
George W. Kail	Canal Dover.
Crown Fire Clay Co.	"
Peter B. Reeves	"
Joseph T. Patton	"
C. E. Warner	Blakes Mills.
Thomas Steele	New Philadelp
Tuscarawas Railroad Co.	"
Seward English	"
Fred Ransch	"
John Dunn	"
Edward Burtscher	"
Wm. Krantz	Canal Dover.
J. E. Murray	"
Pennsylvania Iron & Coal Co.	Black Band.
B. L. Grimm	New Philadelp
Cyrus Kilpatrick	Tracy.
George Hardwidge	Somerdale.
Howell Williams	Midvale.
Haneter & Kemp	Strasburgh.
McClellan Wardell	"
Norris & Tufford	Newcomerstown
Lawhead & Tufford	"
Jacob C. Baker	Bolivar.

MINES EMPLOYING MORE THAN TEN MEN.

VINTON COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Star No. 2	Drift	Star Coal Co.	Hawks.
Inghams	"	Ingham Coal Co.	Mineral.
Oreton	"	Vinton County Coal & Mining Co.	Dayton.
Elk Fork	Shaft	Elk Fork Coal Co.	McArthur.
Hanging Rock	Drift	Hanging Rock Coal Co.	Chicago.
Raccoon		John L. Lawler.	Columbus.

MINES EMPLOYING LESS THAN TEN MEN.

VINTON COUNTY.

Name of Owner or Operator.	P. O. Address.
Smith Bros	McArthur.
E. T. Winters	"
Gillman & Ward	"
Henry Robinet	"
John Blore	Radcliffe.
Hamden Furnace Co.	Hamden Junction.
DeVault & Son	Minerton.
Hezekiah Heasley	Zaleski.

MINES EMPLOYING LESS THAN TEN MEN.

WASHINGTON COUNTY.

Name of Owner or Operator.	P. O. Address.
Webster & Hardin	Beverly.
Ross & Stewart	Coalrun.

MINES EMPLOYING MORE THAN TEN MEN.

WAYNE COUNTY.

Name of Mine.	Kind of Opening.	Name of Owner or Operator.	P. O. Address.
Mobile	Drift	W. P. Ries.....	Dovlestown.
Wayne No. 2.....	Slope	The Ohio Salt Co.....	Wadsworth.
Billman	"	Card & Loomis Coal Co.....	Akron.
West Lebanon No. 1..	Shaft	West Lebanon Coal Co.....	Wooster.

MINES EMPLOYING LESS THAN TEN MEN.

WAYNE COUNTY.

Name of Owner or Operator.	P. O. Address.
Seiberling & Miller.....	Doylestown.
Jacob Santrock	"
J. H. Morgan.....	Fredericksburg.

FIRE CLAY MINES.

Name of Owner or Operator.	P. O. Address.
ATHENS COUNTY.	
Nelsonville Sewer Pipe Co.....	Nelsonville.
Athens Brick Co.....	Athens.
Wassall Fire Clay Co.....	Columbus.
East Clayton Clay Manufacturing Co.....	Nelsonville.
CARROLL COUNTY.	
Minerva Paving Brick Co.....	Minerva.
Beatty Fire Clay Co.....	Magnolia.
Malvern Fire Clay Co.....	Malvern.
American Clay Manufacturing Co.....	Pittsburg, Pa.

FIRE CLAY MINES — Continued.

Name of Owner or Operator.	P. O. Address.
COLUMBIANA COUNTY.	
F. P. Wherry	East Liverpool.
Michael Murphy	"
T. H. Silver	Wellsville.
Vulcan Clay Co.	Vulcan.
American Clay Manufacturing Co.	East Liverpool.
Buckeye Brick Works	Wellsville.
Excelsior Fire Clay Co.	Lisbon.
Keystone Fire Clay Co.	"
Chas. Walters	Salem.
F. L. Heastand	Homeworth.
Columbia Fire Clay Co.	Cleveland.
Standard Pottery Co.	Salineville.
H. A. Thompson & Co.	"
U. S. Clay Manufacturing Co.	Lisbon.
HOCKING COUNTY.	
Columbus Brick & Terra Cotta Co.	Columbus.
Parley Phelps	Gore.
Logan Brick Manufacturing Co.	Logan.
Leroy Kember	Gore.
Joe Bartholow	Logan.
HOLMES COUNTY.	
Millersburg Brick & Tile Co.	Millersburg.
David Miller	Mt. Hope.
Reddett & Sons	Fredericksburgh.
JACKSON COUNTY.	
Oak Hill Fire Brick & Coal Co.	Oak Hill.
Aetna Fire Brick Co.	"
Jefferson Iron Co.	"
JEFFERSON COUNTY.	
American Fire Clay Co.	Empire.
Minor Fire Clay Co.	"
Stratton Bros	"
American Clay Manufacturing Co.	Steubenville.
American Fire Clay Co.	Calumet.
American Fire Clay Co.	Toronto.
American Clay Works	"
Toronto Fire Clay Co.	Steubenville.
J. F. Ball	Calumet.
Standard Brick Works	Wellsville.
LAWRENCE COUNTY.	
D. V. Sparling	Coal Grove.
Hanging Rock Iron Co.	Hanging Rock.
Peter Burke	Steece.
E. B. Williard & Co.	"
Halley & Wells	Pedro.

FIRE CLAY MINES — Continued.

Name of Owner or Operator.	P. O. Addr.
MAHONING COUNTY.	
Greenford Fire Clay Co.....	Greenford.
E. C. Walters.....	Poland.
M. J. Dustman.....	Berlin Center
J. C. Devine.....	Alliance.
Robert Auld.....	Salem.
Buzzard & Wilderson.....	East Lewisto
MUSKINGUM COUNTY.	
Chauncey Ford.....	Roseville.
South Zanesville S. P. & B. Co.....	Zanesville.
W. B. Lowry.....	Roseville.
S. M. Stump.....	South Zanesv
Wm. Bunting.....	Ellis.
George Melhollin.....	Hopewell.
A. Emery.....	Zanesville.
Oakland Pressed Brick Co.....	"
PERRY COUNTY.	
Solomon Hightshoe.....	Somerset.
Samuel Sharkey.....	Crooksville.
Samuel McKeever.....	"
New Lexington Pressed Brick Co.....	New Lexingt
Ohio Mining & Manufacturing Co.....	Shawnee.
Mike Gossman.....	Crooksville.
N. H. Stoneburner.....	"
H. E. Stoneburner.....	"
The American Sand & Facing Co.....	Columbus.
Marion Allen.....	Roseville.
W. A. Bradshaw.....	Buckeye Cott
G. W. Pyle.....	Moxahela.
SCIOTO COUNTY.	
Scioto Star Fire Brick Works.....	Portsmouth.
Webster Fire Brick Co.....	South Webst
Morgan & Horton.....	Eifort.
Kettler Bros.....	Lilly.
Crist Hassalman.....	"
Scioto Fire Brick Co.....	Sciotoville.
STARK COUNTY.	
Riley Newhouse.....	Magnolia.
The Royal Brick Co.....	Canton.
Canton Pressed Brick Co.....	"
Canton & Osnaburgh Brick & Tile Co.....	"
Imperial Shale Brick Co.....	"
Rev. J. H. Harrier.....	North Indust
Massillon Stone & Fire Brick Co.....	Massillon.
The H. B. Camp Co.....	Akron.
Louisville Brick & Tile Co.....	Louisville.
The William Paul Brick Co.....	Massillon.
Diamond Portland Cement Co.....	Middlebranch
Champion Tile Works.....	Louisville.
Canton Sparta Brick Co.....	Mineral City.
J. B. Hoover.....	Alliance.

FIRE CLAY MINES — Concluded.

Name of Owner or Operator.	P. O. Address.
SUMMIT COUNTY.	
J. Stetter	North Springfield.
Merrill Pottery Co.	Akron.
The Robinson Bros. & Co.	"
Summit Sewer Pipe Co.	"
Reuben Swinehart	East Akron.
I. Madlem	"
Akron Clay Co.	Akron.
J. C. Ewart & Co.	"
Myers & Hall.	Mogadore.
W. J. Webb.	"
TUSCARAWAS COUNTY.	
American Fire Clay Co.	Uhrichsville.
Buckeye Clay Manufacturing Co.	"
Advance Fire Clay Co.	"
Crown Fire Clay Co.	Canal Dover.
Dover Fire Brick Co.	Strasburgh.
C. E. Holden.	Mineral City.
J. J. Cristner & Sons.	Baltic.
Navarre Stoneware Co.	Navarre.
George J. Markley.	Mineral City.
Royal Sewer Pipe & F. B. Co.	New Philadelphia.
TRUMBULL COUNTY.	
J. V. Rose.	Sharon, Pa.
VINTON COUNTY.	
Jacob Earnhart	Hue.
H. B. Camp & Co.	Akron.

IRON ORE MINES.

Name of Owner or Operator.	P. O. Address.
JACKSON COUNTY.	
Tropic Iron Co.....	Jackson.
Jefferson Iron Co.....	Oak Hill.
W. B. Yates.....	Kitchen.
LAWRENCE COUNTY.	
Hecla Iron & Mining Co.....	Hecla.
The Vernon Iron Co.....	Campbell
McGugin & Co.....	Olive Furn.
Hanging Rock Iron Co.....	Hanging
John F. Hall Coal Co.....	Campbell
E. B. Willard.....	Steece.
Halley & Wells.....	Pedro.
Daniel V. Sparling.....	Coal Gro.
SCIOTO COUNTY.	
The Clare Iron Co.....	Bloom St.
Hanging Rock Iron Co.....	Hanging
Morgan & Horton.....	Eifort.
VINTON COUNTY.	
Hamden Furnace Co.....	Hamden.

LIMESTONE QUARRIES.

Name of Owner or Operator.	P. O. Address.
ADAMS COUNTY.	
John McNeilan	West Union.
H. T. Herdman.....	Locust Grove.
Thompson Edwards	Wilson.
L. S. Rice.....	Portsmouth.
Samuel Hopkins	Manchester.
ALLEN COUNTY.	
J. C. Marsh.....	Herring.
C. L. Sanford.....	Lima.
B. J. Gantz.....	"
David Jospen	"
Fetter & Sons.....	"
Frank Roush	"
Edward Gray	"
J. W. Long.....	"
Watt Bros	Herring.

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
ALLEN COUNTY — Concluded.	
L. J. Siddall.....	Bluffton.
G. F. Greenwald.....	"
Conrade Tribblehorn.....	"
Mollett Bros.....	"
E. J. Ford.....	Scotts Crossing.
J. C. Ford.....	Elida.
Fisher & Holler.....	Delphos.
Allen Joseph.....	Lima.
Pugh Stone Co.....	"
D. T. Jones & Co.....	Vendocia.
J. C. Steiner.....	Bluffton.
BELMONT COUNTY.	
W. R. Hepburn.....	Morning View.
Meister Bros.....	Bridgeport.
BUTLER COUNTY.	
John Killfogle.....	Hamilton.
D. M. Sheley.....	"
G. Kuentzle.....	"
J. B. Scott.....	Hamilton.
R. J. Livingston.....	Symmes Corners.
W. H. McCurley.....	Ross.
Daniel Pabst.....	Hamilton.
A. Law.....	Jacksonboro.
CLARK COUNTY.	
Moore & Co.....	Cold Springs.
Casper Stone Co.....	Columbus.
Springfield Stone & Lime Co.....	Springfield.
Samuel S. Taylor.....	"
Mill Bros.....	"
The Moore Lime Co.....	"
J. W. Jenkins.....	"
W. A. Ruhsam.....	"
Daniel Baker.....	Enon.
CLERMONT COUNTY.	
W. J. McClave.....	Loveland.
J. D. Sorrell.....	"
Chas. Helmering.....	New Richmond.
Henry W. Harlow.....	Marathon.
E. Hulick.....	Batavia.
CRAWFORD COUNTY.	
A. J. Brown.....	Lykens.
Frank Snavelly.....	Osceola.
Joseph Snavelly.....	"
Chas. Reiff.....	Spore.
Brokensword Stone Co.....	Bucyrus.

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address
CLINTON COUNTY.	
Isaiah F. Miars.....	Wilmington.
George H. Benlehn.....	"
J. W. Frazier.....	"
Mrs. L. A. Babb.....	"
John Huff.....	"
A. W. Clark.....	New Vienna.
Wm. F. Oglesby.....	Clare.
James Wright.....	Port Williams.
John Ballard.....	Wilmington.
Asa Starbuck.....	"
O. B. Trovillo.....	Midland.
John Foster.....	West Woodvill
S. P. Bulkley.....	Kingman.
Lewis Brant.....	"
M. H. Miars.....	Wilmington.
Jasper Brown.....	"
DELAWARE COUNTY.	
Duyer & Son.....	Marion.
F. L. Campbell.....	Delaware.
Thomas Owens.....	"
M. Meredith & Son.....	Radnor.
S. E. Merchant.....	Rathbone.
George Duffy.....	"
Frank L. Parsons.....	Jerome.
Hazleton Sons.....	Delaware.
Scioto Lime & Stone Co.....	"
John Warren.....	Warrenburgh.
DARKE COUNTY.	
J. B. Hershey.....	Greenville.
S. V. McCabe.....	Weavers Static
ERIE COUNTY.	
M. J. Callan.....	Sandusky.
Chas. Schoeffle.....	"
M. Wagner.....	"
Chas. Krueger, Jr.....	"
Kelley Island Lime & Transport Co.....	Cleveland.
H. R. Barnes.....	Sand Hill.
John Widmer.....	Sandusky.
Frank Liles.....	Sand Hill.
FRANKLIN COUNTY.	
Jonas Wilcox.....	Columbus.
The Columbus Stone Co.....	"
The Casperis Stone Co.....	"
James F. Legg.....	Marble Cliff.
J. M. McNinch.....	Columbus.
Wm. Lamb.....	Dublin.
J. C. Thompson.....	"
James Rumsey.....	"
N. Schofield.....	Hilliards.

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
GREENE COUNTY.	
L. Irwin Co.....	Cedarville.
B. Taylor.....	"
Bales & Conklin.....	New Jasper.
C. Toland.....	Jamestown.
Smith.....	Wilberforce.
J. Archer.....	Zimmerman.
HAMILTON COUNTY.	
Schunyer.....	Pleasant Ridge.
Grower.....	Cincinnati.
Howe.....	"
York House.....	"
Lin Cooney.....	"
Stagg & Sons.....	"
Goodman.....	"
Slatterly.....	"
W. Davis.....	"
Weine.....	Carthage.
M. Fields.....	Glendale.
of the Good Shepherd.....	Carthage.
Stone Co.....	Greenfield.
Bros.....	Cincinnati.
as Ruebel.....	Bridgeport.
Zaeske.....	Cheviot.
Moore.....	Cincinnati.
Moone.....	Milford.
HANCOCK COUNTY.	
Morris.....	Findlay.
Wells & Son.....	"
L. Hirshey.....	"
Hershey.....	"
r Bros.....	Arlington.
Renkle.....	Rawson.
Schoonover.....	Findlay.
& McCall.....	"
Dickey.....	Van Lue.
ssenger & Co.....	Arlington.
Huffman.....	Rawson.
HARDIN COUNTY.	
G. Tressell.....	Ada.
eland.....	Dunkirk.
McArthur & Co.....	Kenton.
Bartow.....	Columbus.
& Herzogg.....	Patterson.
lros.....	Ada.
HIGHLAND COUNTY.	
Gorman.....	Hillsboro.
ck Swarranburgher.....	Greenfield.
West.....	"
Stone Co.....	"

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address
HIGHLAND COUNTY — Concluded.	
R. P. Pinkerton.....	Lynchburgh.
Houck Bros	Shackelton.
John Luft	Leesburgh.
Daniel Sharp, Sr.....	Lynchburgh.
Chas. Roshier	Leesburgh.
John Britton	Willetsville.
James Donahoe	Sorg.
George Reed	Ft. Hill.
Chas. Mulnier	Hillsboro.
HOLMES COUNTY.	
L. G. Donald.....	Millersburg.
John Schuler	"
John C. Duncan.....	"
HARRISON COUNTY.	
Foley Bros	Alton.
JACKSON COUNTY.	
Jefferson Furnace Co.....	Oak Hill.
John Irwin	Wellston.
W. B. Yates.....	Kitchen.
JEFFERSON COUNTY.	
D. Lawrence	Richmond.
LAWRENCE COUNTY.	
E. B. Williard & Co.....	Ironton.
Hecla Iron & Mining Co.....	"
Hanging Rock Iron Co.....	Hanging Rock.
Peter Burke	Steece.
Halley & Wells.....	Pedro.
Daniel V. Sparling.....	Coal Grove.
LOGAN COUNTY.	
Sprague & Cantwell.....	Bellefontaine.
Bellefontaine Stone & Lime Co.....	"
H. M. Brown & Son.....	Belle Center.
John L. Stratton.....	West Middleburg.
Jacob Piatt	West Liberty.
D. B. Repogle.....	Bellefontaine.
Gen. A. S. Piatt.....	West Liberty.
LUCAS COUNTY.	
J. L. Pray & Son.....	Whitehouse.
Stephen Brogan	"
Zeller Bros	Maumee.
Thos. Henehan	Toledo.

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
MARION COUNTY.	
Evans Lime & Stone Quarry Co.....	Marion.
& Christian L. & S. Co.....	"
Fairbank.....	"
Evans.....	Owens.
Imon.....	Marion.
MIAMI COUNTY.	
cher.....	Covington.
tone Co.....	Ludlow Falls.
spock.....	"
op.....	"
abe.....	Piqua.
er & Co.....	"
Marble Co.....	"
.....	Covington.
l.....	"
or.....	"
er.....	"
odemus.....	N. Clayton.
hlin.....	"
l.....	Brandt.
rubaker.....	Rex.
on.....	Covington.
.....	Troy.
uilding & Manufacturing Co.....	Tippecanoe City.
.....	Ludlow Falls.
MONTGOMERY COUNTY.	
dney.....	Germantown.
& Talbot Stone Co.....	Dayton.
uel.....	Centerville.
l.....	Dayton.
barr.....	"
nel.....	"
l.....	"
.....	"
ip.....	Sulphur Grove.
ins.....	Englewood.
gas.....	"
w.....	Union.
ndale.....	"
er.....	Amity.
atman.....	"
aver.....	Farmersville.
t.....	Dayton.
MUSKINGUM COUNTY.	
len.....	Dresden.
s.....	Roseville.
MERCER COUNTY.	
er.....	Ft. Recovery.

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Addr
OTTAWA COUNTY.	
N. E. Gregg	Genoa.
Frank Holt	"
John Growey	"
The Toledo White Lime Co.	Martin.
Lilly Lime Co.	Rocky Ridge.
The Clark Co.	Clay Center.
Dr. Jos. Kingham.	Rocky Ridge.
Kelley Island Lime & Transport Co.	Cleveland.
L. A. Beatty	Rocky Ridge.
Jas. Duncan	Toledo.
Limestone Lime Co.	Limestone.
PAULDING COUNTY.	
John McDorman	Roselms.
Reason Johnson	Junction.
J. B. Carey & Son.	Scott.
Patterson Bros	Ada.
Dean Adams	Oakwood.
PICKAWAY COUNTY.	
Mrs. Belle Z. McCoy.	Circleville.
PERRY COUNTY.	
David Hardy	Maxville.
PIKE COUNTY.	
G. W. Nace.	Sinking Spring.
PREBLE COUNTY.	
Jonathan Paxton & Son.	College Corner.
E. A. Ridenour.	"
O. M. Wright.	"
Jas. Saylor	Eaton.
Nathan C. Sloan.	Morning Sun.
John Wright	College Corner.
R. M. Hayes.	Fair Haven.
James A. Kautz & Co.	Eaton.
I. J. Weaver.	Lewisburg.
F. J. Wilson Co.	"
John A. Elliott.	College Corner.
James White	Camden.
Peter Foutz	"
Richard Danily	New Paris.
Elam Fisher	Eaton.
New Paris & Richmond Stone Co.	Richmond, Ind.
Noah Nill	West Alexan.
Chester Elliott	Fair Haven.
G. W. Mann.	Morning Sun.
PUTNAM COUNTY.	
John Diller	Pandora.
Henry Hilty	"

LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
PUTNAM COUNTY — Concluded.	
Sackett.....	Ottowa.
Thomas.....	Rimer.
Wiffy.....	"
W. S. Laner.....	Ottoville.
W. J. Spach.....	Delphos.
W. & Harmon.....	Cascade.
Harman.....	Dorminton.
P. Shoemaker.....	Columbus Grove.
Harman.....	Gilboa.
Kroft Bros.....	Ada.
W. J. Denbaugh.....	Pandora.
W. J. Cheurman.....	Ft. Jennings.
SANDUSKY COUNTY.	
W. J. Limestone Co.....	Gibsonburgh.
Bros.....	Fremont.
W. J. Orser.....	"
T.....	"
W. J. Reech.....	Bellevue.
W. J. Ornung Co.....	Gibsonburgh.
W. J. Kamp.....	Toledo.
SENECA COUNTY.	
W. J. Ker.....	West Lodi.
W. J. Detwiler.....	Bloomville.
W. J. Rty & Co.....	Toledo.
White Lime Co.....	Kansas.
France.....	Bloomville.
W. J. & Geiger.....	"
W. J. Fisher & Son.....	"
Bros.....	Tiffin.
W. J. Lime Building & Sandstone Co.....	"
W. J. Uder.....	"
W. J. Collum Lime Co.....	"
W. J. Tozer.....	Fostoria.
W. J. R & Humphrey.....	Flat Rock.
W. J. Armstrong.....	Republic.
W. J. Maul.....	Bloomville.
W. J. Nis.....	Flat Rock.
SHELBY COUNTY.	
W. J. Atherington & Sons.....	Sidney.
STARK COUNTY.	
W. J. Line.....	Battleburgh.
W. J. Keck.....	Oval City.
W. J. Warstler.....	"
W. J. Wapsaddle.....	Marlboro.
W. J. H. Harrier.....	North Industry.
W. J. Portland Cement Co.....	Middlebranch.
W. J. Holl.....	New Berlin.
W. J. Seifort.....	Paris.

LIMESTONE QUARRIES — Concluded.

Name of Owner or Operator.	P. O. Add
SCIOTO COUNTY.	
Clare Iron Co.....	Bloom Switz
Morgan & Horton.....	Eifort.
M. Coe & Sons.....	Freestone.
UNION COUNTY.	
C. H. Seeley.....	Jerome.
VAN WERT COUNTY.	
B. F. Leslie.....	Convoy.
E. H. France.....	Bloomville.
Wm. D. Semple.....	Van Wert.
J. B. Carey & Sons.....	Scott.
Dr. L. E. Sadd.....	Middlepoint.
Patterson Bros	Ada.
WOOD COUNTY.	
Dougherty & Co.....	Toledo.
The Lime City Co.....	"
N. B. Eddy & Co.....	Luckey.
J. W. & J. J. Unschel.....	Sugar Ridge
Snowflake Lime Co.....	Bowling Gr
J. B. Luckey.....	Toledo.
L. Strayer	Grand Rapid
Del Gilbert	Bowling Gr
Geo. E. Mercer.....	"
H. P. Meyer.....	Hammansbu
M. Daum & Son.....	Carey.
Patterson Bros	Ada.
D. P. Lloyd & Co.....	Fostoria.
J. B. Luckey.....	Toledo.
Isaac Hufford	Stone Ridge

MINING LAWS
OF THE
STATE OF OHIO
WITH
LATEST AMENDMENTS.

PUBLISHED BY E. G. BIDDISON,
CHIEF INSPECTOR OF MINES.

(331)

Mining Laws of Ohio.

INSPECTOR OF MINES.

Sec. 290. For the purpose of facilitating an efficient thorough inspection of mines in Ohio, and to provide an inspecting force therefor, the governor shall appoint and with the consent of the senate, one chief inspector who, with the approval of the governor, shall appoint district inspectors of mines; the chief inspector shall hold his office for the term of four years, and the district inspectors shall hold their office for the term of three years from the date of their appointment, and until their successors are appointed and qualified; the first appointments hereunder shall be made within thirty days from the date when this act shall take effect; and in case of the resignation, removal or death of the chief inspector, or any district inspector, the vacancy shall be filled in the manner provided for original appointments for the unexpired term of the position so made vacant. No person shall be appointed chief inspector of mines unless he is possessed of competent knowledge of chemistry, the geology of Ohio, mineralogy, in so far as those sciences relate to mining, a practical knowledge of mining engineering, and different systems of working and ventilating mines, the nature and properties of the noxious and poisonous gases in mines, particularly fire damp, and of the best means of detecting and removing the same; and no person shall be appointed district inspector of mines unless he be a practical miner of at least five years' experience, and a resident of the district for which he is appointed, for at least two years, and is possessed of a practical knowledge of the mode of working and ventilating mines, of the means of detecting the presence of bad or foul air, noxious and poisonous gases, and of the best means of preventing and removing the same.

Appointment
of chief and
district in-
spectors. who
eligible.

Sec. 290a. That authority be and is hereby given to appoint additional district inspectors of mines; and they shall be appointed in the same manner and possess the same qualifications and receive the same compensation as the five district inspectors of mines authorized by said Sec. 290. The term of office of the two district inspectors of mines provided for shall be three years, and they shall take and give bond, as provided in Sec. 291 of the Revised Statutes of Ohio, and shall be subject to the regulations and requirements of the district inspectors authorized by Sec. 290, as provided in chapter nine of the Revised Statutes of Ohio. The chief inspector of mines shall appoint additional inspectors for service in districts to be

Additional
district in-
spectors.

designated by him, and he is authorized to divide t in seven districts, in each of which one of the dis spectors of mines shall reside.

Bond and oath.

SEC. 291. Before entering upon the discharge duties of their respective offices, the chief inspector district inspectors shall give bond to the state, the fo the sum of five thousand dollars, and the latter in the two thousand dollars each, to be approved by the go conditioned for the faithful performance of their du spectively; said bonds, with an oath of office on e approval of the governor indorsed thereon, shall b with deposited with the secretary of state; the ins while in office, shall not act as agent, manager or engineer for any operator, or in any way be inter operating any mine.

Their powers and duties.

SEC. 292. The chief inspector and district in shall give their whole time and attention to the c their offices, respectively; it shall be the duty of the inspectors to examine all the mines in their re districts as often as possible, to see that all the pr and requirements of this chapter are strictly obser carried out; they shall particularly examine the wc machinery belonging to any mine, examine into t and condition of the mines as to ventilation, circula condition of air, drainage and general security; th make a record of all examinations of mines in their ive districts, showing the date when made, the con which the mines are found, the extent to which the lating to mines and mining are observed or viola progress made in the improvement and security of health sought to be secured by the provisions of this number of accidents, injuries received, or deaths in the mines, the number of mines in their respective the number of persons employed in or about eac together with all such other facts and information c interest concerning the condition of mines, deve and progress of mining in their respective districts, may think useful and proper, which record shall, o fore the first Monday of every month, be filed in t of the chief inspector, to be by him recorded, and : thereof as may be of public interest, to be include annual report; in case of any controversy or disag between the district inspector and the owner and [o rator of any mine, or the persons working therein, o of conditions of emergencies requiring counsel, the inspector may call on the chief inspector for such a and counsel as may be necessary; should the district or find any of the provisions of this chapter violate complied with, by any owner, lessee, or agent in c any mine, he shall immediately notify such owner or agent in charge, of such neglect or violation, an the same is, within a reasonable time, rectified, and visions of this chapter fully complied with, he sh tute a prosecution under the provisions of sec

thousand eight hundred and seventy-one (6871) of the Revised Statutes. The inspectors shall exercise a sound discretion in the enforcement of the provisions of this act, and if in any respect (which is not provided against by, or may result from a rigid enforcement of any express provisions of this chapter), the inspector find any matter, thing or practice in or connected with any such mine, to be dangerous or defective, so as, in his opinion, to threaten or tend to the bodily injury of any person, the inspector may give notice in writing thereof to the owner, agent or manager of the mine, and shall state in such notice the particulars in which he considers such mine, or any part thereof, or any matter, thing of [or?] practice to be dangerous or defective, and require the same to be remedied. For the purpose of making the inspection and examinations provided for in this section, the chief inspector and the district inspectors shall have the right to enter any mine at all reasonable times, by night or by day, but in such manner as shall not unnecessarily obstruct the working of the mine; and the owner or agent of such mine is hereby required to furnish the means necessary for such entry and inspection; the inspection and examination herein provided for shall extend to fire clay, iron ore and other mines, as well as coal mines.

SEC. 293. The chief inspector shall designate the counties or portions thereof in the state which shall compose the different districts, and may at any time change the same, when in his judgment the best interests of the service may require, and shall issue such instructions, make such rules and regulations for the government of the district inspectors, not inconsistent with the powers and duties vested in them by law, as shall secure uniformity of action and proceedings throughout the different districts; and he may order one district inspector to the assistance of any other district inspector, or make temporary transfers of district inspectors, when, in his judgment, the efficiency or necessity of the service demands or permits, and he may, with the consent of the governor, remove any district inspector at pleasure: the district inspectors are hereby invested with all the powers and authority of county auditors, as sealers of weights and measures in the different counties of this state, and for any service performed as such sealers they shall receive the same compensation as now provided by section ten hundred and sixty-two (1062) of the Revised Statutes; but said inspector shall exercise said authority in connection with weights and measures only at mines in their respective districts; the chief inspector shall render such personal assistance to the district inspectors as they, from time to time, may require, and shall make such personal inspection of the mines as he may deem necessary, and his other duties will permit: he shall keep in his office and carefully preserve all maps, surveys and other reports and papers required by law to be filed with him, and so arrange and preserve the same as shall make them a permanent record of ready, convenient and connected reference; he shall compile and consolidate

District, how made and changed.

Rules for district inspectors.

Power of chief over district inspectors.

Their powers as sealers of weights and measures.

Special duties of chief inspector.

His reports.

the reports of district inspectors, and annually make to the governor of all his proceedings, as well as those of the district inspectors, the condition and operation of the different mines of the state, and the number of mines and number of persons employed in or about such mines, the amount of coal, iron ore, limestone, fire clay, or other mineral mined in the state; and for the purpose of enabling him to make such report, the owner, lessee or agent in charge of such mine, who is engaged in mining, and every owner, lessee or agent of any firm, company or corporation in charge of any fire clay, or iron ore mined [mine?] limestone, or quarry, or who is engaged in mining or producing any mineral whatsoever in this state, shall, before the 31st day of January in every year, send to the office of the chief inspector of mines, upon blanks furnished by him, a correct return specifying with respect to the preceding 31st day of December, the quantity of coal, iron ore, fire clay, limestone, or other mineral produced in such mine or quarry, and the number of persons ordinarily employed in or about such mine, or quarry, and above ground, distinguishing the persons and places below ground and above ground. Every owner, lessee or agent of a mine or quarry who fails to comply with this section, or makes any return which to his knowledge is untrue in any particular, shall be deemed guilty of an offence against this section, and shall be fined one hundred dollars to be recovered at the suit of the chief inspector in the courts of the state of Ohio; he shall also include in such return such facts relative to the mineral resources of the state, the development of the same, as shall, in his judgment, be of public interest; he shall enumerate all accidents which have occurred in the manner in which they occurred, in or about the mines, and give all such other information as he thinks useful and proper, and make such suggestions as he deems important relative to mines and mining, and any other legislation that may be necessary on the subject for the better preservation of the life and health of those engaged in such industry.

Sec. 294. The chief inspector shall have an office in the state house, in which shall be carefully kept the records and plans of all mines in the state, and all correspondence, papers, and apparatus and property pertaining to his duties, belonging to the state, and shall be handed over to his successor in office; the district inspectors shall keep their offices in such place in their respective districts as will be most central and convenient to the mining region of their respective districts, and shall preserve in their offices all maps, plans, survey and other papers belonging to their offices, in such manner that they shall be of easy access and convenient reference to persons entitled to examine them. The district inspectors shall receive an annual salary of twelve hundred dollars (\$1200) per annum, and the chief inspector shall receive the same salary as is now provided for inspector of mines.

Mining operators to make certain reports to him.

Penalty for their failure to make such reports.

Matters to be included in report of chief inspector.

Maps, plans of mines, etc., shall be kept in offices.

Salaries.

section twelve hundred and eighty-four of the Revised Statutes.

SEC. 295. There shall be provided for the inspectors weights and measures and all instruments and chemical tests necessary for the discharge of their respective duties under this chapter, which shall be paid for on the certificate of the chief inspector, from his contingent fund, and shall belong to the state.

Instruments, etc., to be furnished inspectors.

SEC. 295a. It shall be unlawful for any mine owner, lessee or operator of coal mines in this state, employing miners at bushel or ton rates, or other quantity, to pass the output of coal mined by said miners over any screen or other device which shall take any part from the value thereof, before the same shall have been weighed and duly credited to the employee sending the same to the surface, and accounted for at the legal rate of weights as fixed by laws of Ohio.

Unlawful to screen coal before weighing.

SEC. 295b. The provisions of this act shall also apply to the class of workers, engaged in mines wherein the mining is done by machinery, known as loaders; whenever the workmen are under contract to load by the bushel, ton or any quantity, the settlement of which is had by weight, the output shall be weighed in accordance with the provisions of this act.

Provisions apply to "loaders."

SEC. 295c. Any mine owner, lessee or operator of coal mines in this state, neglecting or refusing to comply with the conditions required to be performed by sections 295a and 295b, shall be deemed guilty of a misdemeanor, and upon conviction, be fined in any sum not exceeding six hundred (\$600) dollars, nor less than three hundred (\$300) dollars, at the discretion of the court.

Penalty.

SEC. 296. The owner or agent of any mine having an excavation of not less than fifteen thousand cubic yards, shall make, or cause to be made, an accurate map or plan of the working of such mine on a scale of not less than two hundred feet to the inch, showing the area mined or excavated, and the location and connection with such excavation of the line of the lines of all adjoining lands, and the name or names of each owner or owners, so far as known, marked on each tract, and the owner or agent shall annually thereafter make, or cause to be made, an addition to said map, showing the progress and plan of the working of such mine during the previous year up to the date of survey; provided, that said additions shall be made semi-annually whenever the mine inspector deems it necessary and so directs. The map shall be kept at the office of such mine, and open to the inspection of the mine inspector, or his assistants, at all reasonable times, and at the request of the inspector the owner or agent shall file a correct copy of such map with said mine inspector at Columbus, and in case of refusal on the part of the owner or agent to make and file such map, the inspector is authorized and required hereby to cause such map or maps to be made in duplicate, at the expense of said owner or agent, the cost of which shall be recoverable against the

Owner of a mine shall furnish a map of his mine, etc.

Inspector to cause maps to be made.

Additions made semi-annually.

Cause maps to be made in duplicate.

owner or agent in the name of the state mine inspector in case of refusal by said owner or agent to make, such map and the additions thereto to be made, ten days after notice by the mine inspector, said agent shall be liable to a fine of five dollars for each and every day until said map is made, which shall be collected in favor of the state of Ohio, at the suit of the state mine inspector, and the amount so recovered shall be paid into the township school fund of the township when collected. And if any mine is exhausted or abandoned, and before the map is drawn in any portion of the mine, the owner thereof shall cause to be made a correct map of such mine showing the area and working of the same to the township, or of drawing pillars for the purpose of abandoning, and file such map within ninety days thereafter in the office of the county recorder in the county where the mine is located; said map shall have attached the sworn certificate of the mining engineer making the same, and of the mine boss in charge of the underground workings of said mine; such map shall be properly labeled and filed by the recorder, and be preserved as a part of the records of the land on which such mines are located, and the recorder shall receive for said filing from said owner or agent a fee of fifty cents.

Maps of abandoned mines to be made.

Shall have attached sworn certificates.

Outlets required.

Not apply to new openings.

Does not apply unless more than 20 men are employed.

Cages fitted with safe appliances.

SEC. 297. It is unlawful for the owner or agent of a coal mine, worked by shaft, to employ or permit any person to work therein, unless there are, to every seam worked in each mine, at least two separate outlets, such as by natural strata of not less than one hundred feet breadth, by which shafts or outlets distinct means of ingress and egress are always available to the persons employed in the mine; but it is not necessary for the two outlets to be to the same mine if the persons employed therein have ready and available means of ingress and egress by means of more than two openings. This section shall not apply to a new mine while being worked for the purpose of communication between said two outlets so long as more than twenty persons are employed at any one time in the mine, neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to the abandonment of the mine, so long as not more than twenty persons are employed therein at any one time. The cage or cages, or other means of egress shall at all times be available for the persons employed, where there is no second outlet. The escape shafts shall be fitted with safe and available appliances which the persons employed in the mine may readily use in case an accident occurs deranging the hoisting machinery at the main outlets, and such means or appliances shall always be kept in a safe condition; and there shall be an air shaft, with a ventilating furnace at the bottom, to be construed to be an escapement shaft, within the

of this section. To all other coal mines, whether slopes or drifts, two such openings or outlets must be provided within twelve months after shipments of coal have commenced from such mine; and in case such outlets are not provided as herein stipulated it shall not be lawful for the agent or owner of such slope or drift to permit more than ten persons to work therein at any one time. In case a coal mine has but one shaft, slope or drift, for the ingress or egress of the men working therein, and the owner thereof does not own suitable surface ground for another opening, he may select and appropriate any adjoining land for that purpose, and may make an additional shaft or outlet under, through or upon any intervening land, or land adjoining, and shall be governed in his proceeding in appropriating such land by the provisions of law in force, providing for the appropriation of private property by corporations, and such appropriation may be made, whether he is a corporator or not; but no land shall be appropriated under the provisions of this chapter until the court is satisfied that suitable premises can not be obtained upon reasonable terms.

Slopes and drifts must be provided within twelve months.

When owner does not own suitable ground.

Sec. 298. The owner or agent of every coal mine, whether shaft, slope or drift, shall provide and maintain for every such mine an amount of ventilation of not less than 100 cubic feet, per minute, per person employed in such mine, which shall be circulated and distributed throughout the mine in such a manner as to dilute, render harmless and expel the poisonous and noxious gases from each and every working place in the mine, and no working place shall be driven more than sixty feet in advance of a breakthrough, or air-way; and all breakthroughs, or air-ways, except those last made near the working-faces of the mine, shall be closed up and made air-tight, by brattice, trap doors, or otherwise, so that the currents of air in circulation in the mine may sweep to the interior of the mine, where the persons employed in such mine are at work, and all mines governed by the statute shall be provided with artificial means of producing ventilation, such as forcing, or suction fans, exhaust steam, furnaces or other contrivances, of such capacity and power as to produce and maintain an abundant supply of air, and all mines generating fire-damp shall be kept free from standing gas, and every working place shall be carefully examined every morning with a safety lamp, by a competent person or persons, before any of the workmen are allowed to enter the mine. All underground entrances to any places not in actual course of working or extension shall be properly fenced across the whole width of such entrances so as to prevent persons from inadvertently entering the same.

Ventilation.

Shall not drive working place more than 60 feet in advance of breakthrough.

Working places examined every morning.

Sec. 299. The owner or agent of every coal mine operated by shaft, in all cases where the human voice can not be distinctly heard, shall forthwith provide and maintain a metal tube from the top to the bottom of such shaft, suitably calculated for the free passage of sound therein, so that conversation may be held between persons at the bot-

Safety apparatus and precautions.

Cover overhead of cages.

Boilers not nearer than 60 feet to any shaft or slope.

Competent engineers must be employed, etc.

Lighting and ventilation.

Safety lamps the property of mine owner.

Main doors shall have an attendant.

Mine boss shall measure the air once a week.

Notice of accidents.

tom and top of the shaft; there shall also be provided proved safety-catch, and a sufficient cover overhead, carriages used for lowering and hoisting persons, and top of every shaft an approved safety-gate, and an ad brake shall be attached to every drum or machine used for lowering or raising persons in all shafts or slopes; and there shall also be provided in every shaft a traveling or passing way from one side of a shaft bottom to the other, so that persons working therein may not have to pass under descending cages; and all slopes or engine planes, used as traveling ways by persons in any mine, shall be made of sufficient width to permit persons to pass moving cars safely; but if found impracticable to make any slope or engine plane of sufficient width, then safety holes of sufficient dimensions, and not more than sixty feet apart, shall be made on one side of said slope or engine plane. Safety holes shall always be kept free from obstruction, and the roof and sides shall be made secure. The buildings used for generating steam, and the buildings containing boilers shall not be nearer than sixty feet to any shaft or slope, or to any building or inflammable structure coming within or surrounding said shaft or slope; but this shall not apply to any shaft or slope until the work of development and shipment of coal has commenced.

SEC. 300. No owner or agent of any coal mine shall employ by a shaft or slope shall place in charge of any work used for lowering into or hoisting out of such mine persons employed therein, any but experienced, competent and qualified engineers; and no engineer in charge of such engine shall allow any person, except such as may be deputed for that purpose, by the owner or agent, to interfere with the operation of any part of the machinery, and no person shall interfere with the engineer in any way intimidate the engineer in the discharge of his duties; and in no case shall more than ten men ride in a cage or car at one time, and no person shall ride in a loaded cage or car in any shaft or slope.

SEC. 301. All safety lamps used for examining mines, or which are used in any coal mine, shall be the property of the owner of the mine, and shall be under the charge of the agent thereof, and in all mines, whether they generate fire-damp or not, the doors used in assisting directing ventilation of the mine, shall be so hung that they will shut of their own accord and stand open; and all main doors shall have an attendant whose constant duty shall be to open them for transportation and travel, and prevent them from standing open when it is necessary for persons or cars to pass through them; the mining boss shall keep a careful watch over the ventilating apparatus and the air-way, and he shall measure the ventilation at least once a week, at the inlet and outlet also at or near the face of all the entries, and the measurements of air so made shall be noted on blanks, furnished by the chief inspector; and on the first day of each month the mining boss of each mine shall sign one of such

properly filled with the said actual measurements, and forward the same to the chief inspector, and any mining boss making false returns of such air measurements shall be deemed guilty of an offense against this section. Every person having charge of any mine, whenever loss of life occurs by accident, connected with the working of such mine, or by explosion, shall give notice thereof forthwith, by mail or otherwise, to the inspector of mines, and to the coroner of the county in which such mine is situated, and the coroner shall hold an inquest upon the body of the person or persons whose death has been caused, and inquire carefully into the cause thereof, and shall return a copy of the findings and all the testimony to the chief inspector. The owner, agent, or manager of every mine shall, within twenty-four hours next after any accident or explosion, whereby loss of life or personal injury may have been occasioned, send notice in writing to the chief inspector, and shall specify in such notice the character and cause of the accident, and the name or names of the persons killed and injured, with the extent and nature of the injuries sustained. When any personal injury, of which notice is required to be sent under this section, results in the death of the person injured, notice in writing shall be sent to the chief inspector within twenty-four hours after such death comes to the knowledge of the owner, agent or manager; and when loss of life occurs in any mine by explosion, or accident, the owner, agent, or manager of such mine, shall notify the chief inspector, or the district inspector forthwith, of the fact and it shall be the duty of the chief inspector to go himself, or require one of the district inspectors to go, at once to the mine in which said death occurred, and inquire into the cause of the same, and to make a written report, fully setting forth the condition of the part of the mine where such death occurred, and the cause which led to the same; which report shall be filed by the chief inspector in his office as a matter of record, and for future reference.

Shall give notice to the chief inspector and the coroner.

Coroner shall hold inquest.

Duty of inspectors.

Notice when loss of life occurs.

For any injury to persons or property, occasioned by violation of this act, or any willful failure to comply with its provisions by any owner, agent or manager of any mine, a right of action shall accrue to the party injured, for any direct damage he may have sustained thereby; and, in any case of loss of life, by reason of such willful neglect or failure, aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for the recovery of damages for the injury they have sustained.

Penalty.

Right of action, to party injured.

The owner, agent or manager of any mine shall also give notice to the chief inspector of mines in any or all of the following cases:

Other notices to be given chief inspector of mines.

1. Where any change occurs in the name of any mine, in the name of any owner, agent, or manager of any mine, in the officers of any incorporated company which owns and operates a mine.

2. Where any working is commenced for the purpose of opening a new shaft, slope or mine, to which this act applies.

3. Where any mine is abandoned or the working thereof discontinued.

4. Where the working of any mine is recommenced after any abandonment or discontinuance for a period exceeding three months.

5. Where the pillars of a mine are about to be removed or robbed.

6. Where a squeeze or crush, or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs, or a dangerous body of gas is found in any mine.

SEC. 302. No child under fifteen years of age shall be allowed to work in any mine, and in all cases of minors applying for work the agent of such mine shall see that the provisions of this section are not violated; he shall also keep a record of all minors employed by him, or by any person employed in said mine, giving the name, age, place of birth, parents' name and residence, with character of employment, and he shall demand from such minor proof that he has complied with the requirements of the school laws; and it shall be the duty of the mine inspector to inspect such record and to report to the chief inspector of mines the number of minors employed in or about such mines and to enforce the provisions of this section.

Action for non-compliance with statutes.

SEC. 303. In case any coal mine does not, in appliances for the safety of the persons working therein, conform to the provisions of this chapter, or the owner or agent disregards the requirements of this chapter, any court of competent jurisdiction may on application of the inspector, by civil action in the name of the state, enjoin or restrain the owner or agent from working or operating such mine until it is made to conform with the provisions of this chapter; and such remedy shall be cumulative, and shall not take the place of or affect any other proceedings against such owner or agent authorized by law for the matter complained of in such action.

When governor shall convene a board of examiners

SEC. 304. When written charges of gross neglect of duty or malfeasance in office against any inspector is made and filed with the governor, signed by not less than fifteen coal miners or one or more operators of mines, together with a bond in the sum of five hundred dollars, payable to the state, and signed by two or more responsible freeholders and conditioned for the payment of all costs and expenses arising from the investigation of such charges, the governor shall convene a board of examiners, to consist of two practical coal miners, one chemist, one mining engineer and one operator, at such time and place as he deems best, giving ten days' notice to the inspector against whom the charges are made, and also the person whose name appears first in the charges; and the board when so convened, and having been first duly sworn, truly to try and decide the charges made

Duties of the board.

shall summon any witnesses so desired by either party, and examine them on oath, which may be administered by any member of the board, and depositions may be read on such examination, as in other cases; and the board shall examine fully into the truth of such charges, and report the result of their investigation to the governor; and the board shall award the costs and expenses of such investigation against the inspectors or the persons signing the bond according to their finding, against said inspector or in his favor, which costs and expenses shall include the compensation of such board, of five dollars per day for each member, for the time occupied in the trial and in traveling from and to their homes; and the attorney general shall forthwith proceed to collect such costs and expenses, and pay the same into the state treasury, being in the first instance paid out of the state treasury on the certificate of the president of such board.

SEC. 305. In all coal mines in the state the miners employed and working therein, the owners of the land or other persons interested in the rental or royalty of any such mine, shall at all proper times have full right of access and examination of all scales, machinery or apparatus used in or about such mine to determine the quantity of coal mined, for the purpose of testing the accuracy and correctness of all such scales, machinery or apparatus; and such miners, landowners or other persons may designate or appoint a competent person to act for them, who shall at all proper times have full right of access and examination of such scales, machinery or apparatus, and seeing all weights and measures of coal mined, and the accounts kept of the same; but not more than one person on behalf of the miners collectively, or one person on behalf of the landowners or other persons interested in the rental or royalty jointly, shall have such right of access, examination and inspection of scales, weights, measures and accounts at the same time, and that such person shall make no unnecessary interference with the use of such scales, machinery or apparatus; and the miners employed in any mine may, from time to time, appoint two of their number to act as a committee to inspect, not oftener than once in every month, the mine and the machinery connected therewith, and to measure the ventilating current, and if the owner, agent or manager so desires, he may accompany said committee by himself or two or more persons which he may appoint for that purpose; the owner, agent or manager shall afford every necessary facility for making such inspection and measurement, but the committee shall not in any way interrupt or impede the work going on in the mine at the time of such inspection and measurement, and said committee shall, within ten days after such inspection and measurement, make a correct report thereof to the inspector of mines, on blanks to be furnished by said inspector for that purpose; and if such committee make to the inspector a false or untrue report of the mines, such act shall constitute a violation of this section.

Right of access to mines, etc.

Right to test the accuracy of the scales.

Miners to appoint a committee to inspect mine and machinery, etc.

Committee to report to the inspector.

SEC. 306. Only a pure animal or vegetable oil, or oil as free from smoke as a pure animal or vegetable oil, and not the product or by-product of rosin, and which shall, on inspection, comply with the following test, shall be used for illuminating purposes in the mines of this state: All oil must be tested at sixty degrees Fahrenheit. The specific gravity of the oil must not exceed twenty-four degrees Tagliabue. The test of oil must be made in a glass jar and five-tenths inches in diameter by seven inches in length. If the oil to be tested is below forty-five degrees Fahrenheit in temperature, it must be heated until it reaches eighty degrees Fahrenheit; and should the oil be above forty-five degrees and below sixty degrees Fahrenheit, it must be raised to a temperature of about seventy degrees Fahrenheit, when, after being well shaken, it should be allowed to cool gradually to a temperature of sixty degrees Fahrenheit, before finally being tested. In testing the gravity of the oil, the Tagliabue hydrometer must be used, if possible, read from below, and the last line which appears under the surface of the oil shall be regarded as the true reading. In case the oil under test should be opaque or turbid, one-half of the capillary attraction shall be deducted and taken to be the true reading. Where the oil is of a different color under difficult circumstances, an allowance of one-half degree may be made for possible error in parallax before condemning the oil for use in the mine. All oil sold to be used for illuminating purposes in the mines of this state, shall be contained in barrels or packages branded conspicuously with the name of the dealer, the specific gravity of the oil, and the date of shipment.

SECTION 2. That section 306 be supplemented by the enactment of the following section, numbered as indicated.

SEC. 306a. Any person or persons, firm or corporation, which ships any oil contained in any barrel or package or packages, which are not branded as prescribed in section 306, said oil to be used for illuminating purposes in coal or any other mines, and any person or persons, firm or corporation which sells any oil other than that prescribed in section 306, to be used for illuminating purposes in coal or other mines, and any person or persons, firm or corporation, having in charge the operation or running of a mine, which, in a mine under his or its charge uses or permits the use of any oil other than that prescribed in section 306, and any miner or mine employe who uses, with knowledge of its character, in any mine in this state any oil other than that prescribed in section 306, shall be fined not less than five nor more than fifty dollars; and any individual, firm, company or corporation which sells any oil other than that prescribed in section 306, in a quantity exceeding five barrels at one sale, to be used for illuminating purposes in coal or other mines, shall be fined not less than twenty-five nor more than one hundred dollars. All magistrates and justices of the peace shall have jurisdiction to try and punish violations of this section, and their judgment shall be

Every person who, after being once convicted of violating this section, shall be convicted of again violating any of the provisions of this section, may, in addition to the fine before provided, be imprisoned not less than ten days nor more than thirty days. On complaint, before a mayor or justice of the peace, of a second violation of this act involving the punishment of imprisonment, if a trial by jury be not waived, a jury shall be chosen and the case tried, after the manner provided in section 3718a of the Revised Statutes. All fines assessed and collected under prosecutions begun, or caused to be begun by the chief inspector of mines, or any district inspector of mines, shall be paid by the court to the chief inspector of mines, and by him paid into the state treasury to the credit of a fund which is hereby appropriated for the use of the chief inspector of mines in prosecuting violations of this section. Any excess of fines collected over the expenses incurred in prosecutions under this section remaining at the close of the fiscal year, shall be credited to the general revenue fund of the state.

SECTION 3. Section 306, as amended March 29, 1892, by O. L., 164), is hereby repealed, and this act shall take effect and be in force from and after its passage.

SEC. 6871. Whoever knowingly violates any of the provisions of sections two hundred and ninety-seven, two hundred and ninety-eight, two hundred and ninety-nine, three hundred, three hundred and one, three hundred and two, and three hundred and five, or does any act whereby the life or health of the persons, or the security of any mine and machinery are endangered; or any miner or other person employed in any mine governed by this statute, who intentionally and willfully neglects or refuses to securely prop the roof of any working place under his control; or neglects or refuses to obey any order given by the superintendent of mine in relation to the security of the mine in the part thereof where he is at work, or for fifteen feet back from the face of his working place; or any miner, workman, or other person who shall knowingly injure any water-gauge, barometer, air-course or brattice, or shall obstruct or throw down any air-ways, or shall handle or disturb any part of the machinery of the hoisting engine, or open a door of the mine and not have the same closed again, whereby danger produced either to the mine or those that work therein; or who shall enter any part of the mine against caution; or who shall disobey any order given in pursuance of this act; or who shall do any willful act, whereby the lives and health of persons working in the mine, or the security of the mine, or the machinery thereof, is endangered; or any person having charge of a mine, whenever loss of life occurs by accident connected with the working of such mine, or by explosion, who neglects or refuses to give notice thereof forthwith, by mail or otherwise, to the chief inspector of mines, or to the coronor of the county in which such mine is situated; or any such coroner who neglects or refuses to hold an inquest upon the body of the person whose death has

Mines; penalty for injuring.

Penalty for neglecting to securely prop the roof.

Penalty for disturbing machinery.

Penalty for neglecting to notify coroner or chief inspector.

To supply
timber.

been thus caused, and return a copy of his findings and the testimony to the inspector, shall be fined not less than fifty dollars, or imprisoned in the county jail not more than thirty days, or both. The owner, agent, or operator of every coal mine shall keep a supply of timber constantly on hand, and shall deliver the same to the working place of the miner, and no miner shall be held responsible for accidents which may occur in mines where the provisions of this section have not been complied with by the owner, agent or operator thereof.

AN ACT

For regulating the weighing of coal at the mine where mined.

Weighing of
coal; oath of
weighmaster.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That whoever shall be employed to weigh coal as it comes from the mine where mined, where such weight shall be the weight upon which the amount of mining for the person mining such coal shall be estimated and the weight upon which the royalty due the owner of the lands from which such coal shall be mined, shall be estimated at any mine where ten or more miners shall be employed, shall take and subscribe an oath before some competent officer to administer such oath, that he will correctly weigh all coal taken from such mine under existing contracts between operator, miner and land owners, and give due credit for the same to the miner mining such coal in said mine, and the landowner when required, own the lands from which such coal is mined, and shall enter into bond in the sum of three hundred dollars, with two sufficient sureties and payable to the state of Ohio, said bond to be approved by and filed with the township clerk of the township where such mine may be situated for the faithful discharge of such oath. Said oath to be endorsed upon said bond.

Bond of land-
owner.

Duty of prosecuting attorney.

SEC. 2. It shall be the duty of the prosecuting attorney of the county in which such mine is situated, to prosecute persons charged with violation of such oath.

Penalty.

SEC. 3. Any person convicted of such violation shall be fined in the sum of not less than fifty dollars, nor more than five hundred dollars, or imprisoned in the county jail of the county where conviction is had for not less than ten days nor more than sixty days, or both, at the discretion of the court.

When act takes
effect.

SEC. 4. This act shall take effect and be in force from and after September 1, 1898.

Passed April 21, 1898.

AN ACT

Supplementary to section 3184 of the Revised Statutes, as amended
March 22, 1891, to be sectionally numbered 3184a.

SEC. 3184a. Any person who performs labor in mining coal, or removing the same from the mines, or other manual labor connected therewith, for any coal or mining company owning, operating or leasing coal mines within this state, by virtue of a contract with the owner, owners, or his or their authorized agent, shall have a lien to secure the payment for the same upon the mine or mines of such company and upon all the rights of the company or corporation owning or leasing such mines, and upon all the personal property of any such company or corporation used in conducting their business of mining coal, whether the same be located at or near the mines or elsewhere.

Lien upon
mines for
labor.

Passed March 27, 1889.

AN ACT

"To permit mine and quarry operators to cross roads," passed
February 17, 1893.

SECTION 1. That any individual, partnership or corporation in Ohio, who may now or hereafter own any land or any interest either in fee or otherwise, containing any coal, clay or stone, and over any portion of which shall pass any state, county or township road or public highway, with the consent of the board of county commissioners in case of state or county roads, or township trustees in case of township roads, shall have and are hereby authorized to excavate, mine, quarry through or under any such road; provided, however, that before said work shall be commenced, said individual, partnership or corporation shall execute and deliver to the board of county commissioners of any such county, a bond with good and sufficient surety, in such an amount as shall be by said board considered sufficient to cover all damages that may accrue by reason of excavating, mining or quarrying through or under any such road, the same to be approved by said board; conditioned that while crossing over or mining or quarrying under any such road, a safe and unobstructed passage way or road shall be kept open by such individual, partnership or corporation for public use, and as soon as practicable the said road shall be fully restored to its original safe and passable condition.

Conditions upon
which mine and
quarry operators
permitted to
undermine or
cross public
roads.

SEC. 4374. A person owning land adjoining a mine worked for the production of coal, ore, or other mineral substance, or a person having an interest in such mine, having reason to believe that the protection of his interest in the

How owner of
land adjoining
mine may
enter and ex-
amine same.

mine, or in like minerals on his adjoining land, requires it, upon making affidavit to that effect before a justice of the peace or other proper officer, may enter such mine, and have an examination or survey made thereof; but such examination or survey shall not be made until one day's notice thereof is given to the parties in interest, nor at unreasonable times, but in such time and in such manner as will least interfere with the working of the mine, if the same is being operated at the time.

Facilities for such examination.

SEC. 4375. When the affidavit has been made and notice given, the person in charge of the mine shall, on the application of the party giving the notice, transport, by the ordinary method in use at such mine for entrance and exit, a surveying party of not more than five persons, furnish to such party a competent guide and supply them with approved safety lamps; and for every person so transported, he shall be entitled to receive, from the person requesting such survey, the sum of fifty cents, unless the shaft exceeds two hundred and fifty feet in depth, when he shall be entitled to the sum of one dollar for each person, and five dollars per day for the guide.

Damages sustained by such examination.

SEC. 4376. If the parties working or occupying such mine sustain any damage, for which compensation should be made, by reason of such examination or survey having been made at unreasonable times, or in an improper or unwarrantable manner, the person making the same, or causing the same to be made, shall be liable therefor.

Penalty for hindering such examination.

SEC. 4377. The parties working or occupying such mine shall not hinder or obstruct the examination or survey, when made at a reasonable time and in a reasonable manner, under a penalty of not less than fifty nor more than five hundred dollars for each offense, to be recovered before a court of competent jurisdiction.

Action for refusal to permit examination.

SEC. 4378. The party who makes the application for the survey may, upon the refusal of the owner or person in charge of the mine to comply with the foregoing provisions, recover judgment, as upon default, in a court of competent jurisdiction, against the owner of such mine, in such sum as such party may declare under oath he believes to be justly due him for coal or other mineral belonging to him taken by the owner of such mine without his permission; and the statute of limitations shall not be operative as against such claim; but the demand and refusal to enter such mine shall be first proven to the satisfaction of the court or jury, and the refusal of the person in charge of the mine shall be held to be the refusal of the owner.

To whom provisions concerning examination available.

SEC. 4379. The provisions of this chapter shall be available to any person who, on his oath, states that he is the owner or authorized agent of any owner of land which he believes contains coal or other valuable mineral substance within one mile of such shaft, although it does not adjoin any mine of the owner of such shaft; the affidavit required

shall be sufficient if it state that the lands in which the affiant is interested are in the vicinity of such shaft, and not more than one mile distant therefrom; and service upon any owner or superintendent of such shaft shall be sufficient.

AN ACT

To protect the mines in Ohio and the lives of the persons employed therein.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, It shall be the duty of every owner, agent, or lessee of any land within this state underlaid with mineral stone coal, and of every person, firm, or corporation engaged in drilling or exploring for natural gas or oil upon such land, upon notice from the chief inspector of mines, or from any district inspector of mines, or before abandoning or ceasing to operate any gas or oil wells drilled upon such lands, to make or cause to be made, a complete and accurate map thereof, which shall show the boundaries of each tract of land drilled upon, and the buildings and all monuments found upon such premises. Each well shall be plainly marked by a name, number or letter, and located whenever possible with reference to some well defined and lasting monument, so that its exact location may be easily determined. Such map shall show the depth at which each well pierced each vein of coal, giving the thickness of each strata. On each map shall be a sworn statement of the engineer or surveyor making it, together with a sworn statement of the owner, agent or lessee operating such oil or gas wells, or of the owner of such premises, that it is a true and accurate representation of the property; and a copy thereof drawn upon tracing linen, shall be filed in the office of the chief inspector of mines, and be open to inspection at all reasonable times.

SEC. 2. It shall be the duty of every person, firm or corporation owning, or leasing any land underlaid with mineral stone coal, and upon which gas or oil wells have been drilled to, or below any vein or seam of such mineral coal, before proceeding to mine such coal, to make or cause to be made or filed in the office of chief inspector of mines such a map as is described in section 1 of this act.

SEC. 3. Whenever any person, firm or corporation sinks any well for gas or oil on lands upon which coal or other minerals is being mined, and which well passes through any mine, it shall be the duty of the person owning such land, or drilling such well, to drill the hole to a depth of at least ten feet below the vein of coal or other mineral being mined, when such hole shall be cased, and sealed upon the outside of the casing with suitable material

to the level of the coal floor; and each vein of mineral being mined, pierced by such well shall be sealed in the same manner.

SEC. 4. It shall be the duty of the owner of any lands or of the owner, or operator of any well drilled for gas or oil thereon, and which in drilling shall have passed through any vein of minable coal, before abandoning, or ceasing to operate any such well, and before drawing the casing therefrom, to seal the same in the manner following: There shall be driven in such well to a depth of at least twenty-five feet below the floor of the lowest coal measure, a round, seasoned wooden plug at least two feet in length, and equal in diameter to the diameter of the well at that point. After the plug has been properly driven, there shall be filled in on top of the same to a depth of at least twenty feet, hydraulic cement lime and sharp sand, well mixed one part each of the two former to two parts of the latter material. Immediately thereafter there shall be driven well down into the cement, a round, seasoned wooden plug, at least three feet in length, tapering in form and to be of the same diameter at a distance of twelve inches from the smaller end as the diameter of the well at the point to which the plug is driven.

Where any gas or oil well passes through any gas or oil bearing rock lying above the coal measures, the owner, agent or lessee thereof, shall, upon abandoning or ceasing to operate such well, drive a dry wooden plug not less than two feet in length, equal in diameter to the diameter of the hole, to a point as near as possible to the top of the coal vein, on the top of which there shall be filled at least five feet of sediment of drillings, or cement and sand, as the mine inspector shall direct.

SEC. 5. The owner, agent or lessee of any land upon which there has been drilled any oil or gas well which has penetrated any vein of coal shall, before abandoning or ceasing to operate, or removing the casing from such well give due notice in writing to the chief inspector of mines of such fact and designating therein the well to be abandoned; and it shall thereupon be the duty of such chief inspector of mines, or of any district inspector, to go at once to such well, and require the owner or agent of the land, or the owner, agent or lessee of such well to plug the well as provided in this act.

In case such well is not plugged in the manner required by law within ten days after the time the chief or district inspector shall have ordered the same done, the chief or district inspector may cause the well to be plugged, and the costs and expenses of such plugging may be recovered of the person, firm or corporation whose duty it is to seal the same, in the manner provided for the recovery of penalties by section six of this act.

SEC. 5a. It shall be the duty of every person, firm or corporation before attempting to drill any gas or oil well upon any land underlaid with mineral stone coal, first to make application to the chief inspector of mines for a license

therefor, upon blanks to be furnished by him, granting to each person, firm or corporation the right to drill such gas, oil well or wells. Said application must contain an accurate description of the lot or land upon which said gas or oil well is to be drilled, together with such other information and descriptive matter as the chief inspector of mines may require; and for purposes such inspector is hereby authorized and empowered to prepare or cause to be prepared such blanks and forms as he may consider necessary to subserve the purposes of this act.

SEC. 5b. Upon such application being made and signed by the person, firm or corporation desiring such license and the payment of a fee therefor, hereinafter designated, it shall be the duty of such chief inspector of mines to issue to such person, firm or corporation for each and every well so to be drilled, a license granting to them the right to drill such well upon the lot or land so described in such application. Such person, firm or corporation shall pay to such inspector of mines for each license herein provided for, the sum of five dollars, which sum shall be paid to such chief inspector of mines and by him paid to the treasurer of state, to be credited to a fund, a sufficient amount of which is hereby appropriated for the purpose of defraying the expenses of the inspector of oil and gas wells for the sealing of abandoned oil and gas wells in the manner set forth in the several sections of this act.

SEC. 5c. When in the opinion of the chief inspector of mines, it becomes necessary, he may appoint a suitable person or persons to attend upon and witness the plugging and sealing of abandoned gas and oil wells as provided in this act. A person, firm or corporation desiring to abandon any gas or oil well shall notify said chief inspector of mines or other person appointed by him for such purpose of such desire and of the time when said well will be plugged and sealed. It shall then be the duty of such inspector of mines or other person appointed by him, as provided herein, upon receipt of reasonable notice to attend upon and witness the sealing of such well. The person witnessing the sealing of such well shall immediately make report to the chief inspector of mines on blanks provided therefor, giving the date, manner of sealing, names of persons engaged therein, together with the witnesses present at the time of said sealing, and such other information as the chief inspector of mines may require.

SEC. 5d. Such person so appointed to witness the plugging and sealing of abandoned wells for his services shall receive the sum of one dollar and his actual expenses in connection therewith, to be paid out of the fund herein provided, upon a requisition signed by the chief inspector of mines.

SEC. 5e. The chief inspector of mines shall keep a record in his office in which shall be entered a copy of each application for a license, together with the date of issue of such license and to whom issued; also the date when each

well was abandoned and sealed, and the names of the sons witnessing such sealing.

SEC. 6. Every person, firm or corporation, failing to comply with any of the provisions of this act, shall be subject to a penalty of not less than one hundred dollars, more than one thousand dollars, to be recovered by action in the name of the state, and on collection, paid into the treasury of the state to the credit of a fund which is hereafter appropriated for prosecuting violations of this act, to be paid out on requisitions signed by the chief inspector of mines. Such action may be instituted in the court of common pleas of the county wherein any such well is located in Franklin county.

In addition to the penalties herein provided, every person violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction, be liable to a fine in any sum not less than fifty dollars nor more than one hundred, or be imprisoned not less than ten days nor more than sixty days, or both.

SEC. 7. This act shall take effect and be in force from and after its passage.

Passed April 23, 1898.

AN ACT

To provide against the payment of wages in scrip, orders, etc., and against selling goods or supplies to employes at excessive prices.

SEC. 7015. It shall be unlawful for any person, firm, company, or corporation to sell, give, deliver, or in any manner issue, directly or indirectly, to any person employed by him or it, in payment of wages due for labor, or as advances on the wages of labor not due, any scrip, token, draft, check, or other evidence of indebtedness payable or redeemable otherwise than in money; any violations of the provisions of this section shall be punishable by a fine not less than twenty-five nor more than one hundred dollars, imprisonment of not more than thirty days, or both; the amount of any scrip, token, check, draft, order, or other evidence of indebtedness, sold, given, delivered, or in any manner issued, in violation of the provisions of this section shall be recovered in money at the suit of any holder thereof, against the person, firm, company, or corporation issuing, giving, delivering, or in any manner issuing the same, and any scrip, token, check, draft, order, or any other evidence of indebtedness issued in violation of the provisions of this section, and presented by the holder thereof, shall be taken as prima facie evidence in any court of the guilt of the person, firm, company or corporation issuing, selling, giving, delivering, or in any manner issuing

ame, and for the purpose of this act, in case of a firm or corporation, the person selling, giving, delivering, or in any manner issuing said scrip, token, check, draft, order or other evidence of indebtedness shall be the defendant to the criminal action, and the firm, company or corporation shall be held as the defendant in the civil action. Nothing in this section shall apply or affect the right of any person, firm, company or corporation from giving orders on any store or business house, or firm in the business or profits of which he has no interest, directly or indirectly.

SEC. 7016. Whoever compels, or in any manner seeks to compel, or attempts to coerce an employe of any person, firm, or corporation to purchase goods or supplies from any particular person, firm or corporation, shall be fined not more than one hundred nor less than twenty dollars, or imprisoned not more than sixty days, or both; and whoever sells goods or supplies of any kind, directly or indirectly, to his employe, or pays the wages of labor of his employes in goods or supplies of any kind, directly, or through the invention of scrip, order, or other evidence of indebtedness, at higher prices than the reasonable or current market value in cash of such goods or supplies, shall be liable to like punishment and penalties above specified, and shall in addition thereto, be liable in civil action to the party aggrieved, in double the amount of any charges made for such goods or supplies in excess of the reasonable or current market value in cash, of such goods or supplies.

SEC. 7017. The prosecuting attorney of any county, upon complaint made to him of any violation of either of the two preceding sections within his county, shall cause such complaint to be investigated before the grand jury.

AN ACT

To amend "an act to secure prompt payment of wages of certain employes twice in each month," passed March 21, 1887 (vol. 84, page 214).

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the above recited act be so amended as to read as follows:

SEC. 1. That every incorporated manufacturing, mining, mercantile, street-railroad, telegraph, telephone, express, water company, and construction companies, or contractors building railroads, shall pay, in lawful money, or by check, draft or order, payable in lawful money, at sight or on demand, on a bank located at a distance not greater than eight miles from the place where said labor was performed, twice in each month, each and every employe engaged in its business, the wages earned by such employe to within ten days of the date of said payment; provided, however, that at any time of payment any employe shall be absent from

Payment of wages of certain employes twice a month.

his regular place of labor, he shall be entitled to said payment at any time thereafter, during their regular business hours, upon demand; and provided, further, that said employer may retain at each payment, any amount said employer may order withheld from his or her wages for nitro powder, tools, tool sharpening, or oil due said employer.

Retention of
certain amounts.

[Section 2, as amended March 27, 1889.]

SEC. 2. Any corporation mentioned in section 1 of this act, violating any provisions of this act, shall be punished by a fine not exceeding one hundred nor less than fifty dollars. Justices of the peace, mayors and police judges shall have final jurisdiction in all cases arising under the provisions of this act; and a corporation shall be notified by warrant to be served upon the president, secretary, treasurer, or managing agent thereof; provided, that the defendant shall be entitled, on demand, to a trial by jury. If a prosecution be before a justice of the peace, and a trial by jury be not waived, the said justice shall issue a venire to any constable of the county, containing the names of six electors of the county, to serve as jurors to try such case, and make due return thereof. Each party shall be entitled to two peremptory challenges, and shall be subject to the same challenges as jurors are subject to in criminal cases in court of common pleas. If the venire of sixteen names be exhausted without obtaining the required number to fill the panel, the justice may direct the constable to summon any of the bystanders to act as jurors; but costs shall not be required to be advanced or paid by a person or an officer authorized or required by statute to prosecute such case, and if the defendant be acquitted, or if he be convicted, committed to jail in default of payment of fine and costs, the justice, mayor, or police judge, before whom the case was brought, shall certify such costs to the county auditor, who shall examine, and, if necessary, correct the account, and issue his warrant to the county treasurer in favor of the respective officers to whom costs are due for the amount due to each; provided, complaint for such violation is made within thirty days from the date thereof; providing that in pursuance of and under this act there shall not be more than one conviction of the same corporation during any one year. And it shall be the duty of the inspector of schools and factories, on complaint of three or more employees of such corporation to enforce the provisions of this act.

AN ACT

To authorize the creation and to provide for the operation of tribunals of voluntary arbitration to adjust industrial disputes between employers and employed.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the court of common pleas of each county, or a judge thereof in vacation, shall have the power, and upon the presentation of the petition, or of the agreement hereinafter named, it shall be the duty of said court, or a judge thereof in vacation, to issue, in the form hereinafter named, a license or authority for the establishment within and for each county of tribunals for voluntary arbitration and settlement of trade disputes between employers and employed in the manufacturing, mechanical, or mining industries.

SEC. 2. That said petition or agreement shall be substantially in the form hereinafter given, and the petitions shall be signed by at least forty persons employed as workmen and by four or more separate firms, individuals, or corporations within the county, or by at least four employers, each of whom shall employ at least ten workmen, or by the representative of a firm, corporation, or individual employing not less than forty men in their trade or industry; provided, that at the time the petition is presented, the judge before whom said petition is presented, may, upon motion, require testimony to be taken as to the representative character of said petitioners, and if it appears that the said petitioners do not represent the will of a majority, or at least one-half of each party to the dispute, the license for the establishment of the said tribunal may be denied, or may make such other order in this behalf, as to him shall seem fair to both sides.

SEC. 3. If the said petition shall be signed by the requisite number of both employers and workmen, and be in proper form and contain the names of the persons to compose the tribunal, being an equal number of employers and workmen, the judge shall forthwith cause to be issued, a license substantially in the form hereinafter given, authorizing the existence of such tribunal and fixing the time and place of the first meeting thereof, and an entry of the license so granted shall be made upon the journal of the court of common pleas of the county in which the petition originated.

SEC. 4. Said tribunal shall continue in existence for one year from the date of the license creating it, and may take jurisdiction of any dispute between employers and workmen, in any mechanical, manufacturing, or mining industry or business, who shall have petitioned for the tribunal, or have been represented in the petition therefor, or who may submit their disputes in writing to such tribunal for decision. Vacancies occurring in the membership of the tribunal shall be filled by the judge or court that licensed

said tribunal, from three names presented by the members of the tribunal remaining of that class in which the vacancy occurs. The removal of any member to an adjoining county shall not cause a vacancy in either the tribunal or the place of umpire. Disputes occurring in one county may be referred to a tribunal already existing in an adjoining county.

The place of umpire in any of said tribunals and vacancies occurring in such place, shall only be filled by the mutual choice of the whole of the representatives of both employers and workmen constituting the tribunal, immediately upon the organization of the same. The umpire shall be called upon to act after disagreement is manifested in the tribunal by failure during three meetings held and full discussion had. His award shall be final and conclusive upon such matters only as are submitted to him in writing and signed by the whole of the members of the tribunal, or by the parties submitting the same.

SEC. 5. The said tribunal shall consist of not less than two employers or their representatives and two workmen. The exact number which shall in each case constitute the tribunal shall be inserted in the petition or agreement, and they shall be named in the license issued. The said tribunal when convened, shall be organized by the selection of one of their number as chairman and one as secretary, who shall be chosen by a majority of the members, or if such majority cannot be had after two votes then by secret ballot, or by lot, they prefer.

SEC. 6. The members of the tribunal shall receive no compensation for their services from the city or county, but the expenses of the tribunal, other than fuel, light, and the use of the room and furniture, may be paid by voluntary subscription, which the tribunal is authorized to receive and expend for such purposes. The sessions of such tribunals shall be held at the county seat of the county where the petition for the same was presented, and a room in the courthouse for the use of said tribunal shall be provided by the county commissioners.

SEC. 7. When no umpire is acting, the chairman of the tribunal shall have power to administer oaths to all witnesses who may be produced, and a majority of said tribunal may provide for the examination and investigation of books, documents and accounts pertaining to the matters in hearing before the tribunal, and belonging to either party to the dispute; provided, that the tribunal may unanimously direct that instead of producing books, papers and accounts before the tribunal an accountant, agreed upon by the entire tribunal, may be appointed to examine such books, papers and accounts, and such accountant shall be sworn to well and truly examine such books, documents and accounts, as may be presented to him, and to report the results of such examination in writing to said tribunal. Before such examination the information desired and required by the tribunal shall be plainly stated in writing and presented to said accountant, which statement shall be signed by the members

of said tribunal, or by a majority of each class thereof. Attorneys at law or other agents of either party to the dispute shall not be permitted to appear or take part in any of the proceedings of the tribunal, or before the umpire.

SEC. 8. When the umpire is acting he shall preside, and he shall have all the powers of the chairman of the tribunal; and his determination upon all questions of evidence, or other questions, in conducting the inquiries then pending shall be final. Committees of the tribunal, consisting of an equal number of each class, may be constituted to examine into any question in dispute between employers and workmen which may have been referred to said committee by the tribunal, and such committee may hear and settle the same finally, when it can be done, by a unanimous vote, otherwise the same shall be reported to the full tribunal, and be there heard, as if the question had not been referred. The said tribunal, in connection with the umpire, shall have power to make, ordain and enforce rules for the government of the body when in session, to enable the business to proceed with in order, and to fix its sessions and adjournments; but such rules shall not conflict with this statute, nor with any of the provisions of the constitution and laws of Ohio.

SEC. 9. Before the umpire shall proceed to act, the question or questions in dispute shall be plainly defined in writing, and signed by the members of the tribunal, or a majority thereof of each class, or by the parties submitting the same; and such writing shall contain the submission of the decision thereof to the umpire by name, and shall provide that his decision thereon, after hearing, shall be final. The umpire shall be sworn to impartially decide all questions that may be submitted to him during his term of office. The submission and his award may be made in the form hereinafter given, and said umpire must make his award within ten days from the time the question or questions in dispute are submitted to him. Said award shall be made to the tribunal; and if the award is for a specific sum of money, said award may be made a matter of record by filing a copy thereof in the court of common pleas of the county wherein the tribunal is in session. When so entered of record it shall be final and conclusive, and the proper court may, on motion of anyone interested, enter judgment thereon; and when the award is for a specific sum of money, may issue final and other process to enforce the same.

SEC. 10. The form of the joint petition or agreement praying for a tribunal under this act shall be as follows:

To the Court of Common Pleas of———County (or to a judge thereof, as the case may be):

The subscribers hereto, being the number and having the qualifications required in this proceeding, being desirous of establishing a tribunal of voluntary arbitration for the

MINING LAWS.

settlement of disputes in the———(here name the branch of industry) trade, and having agreed upon A, B, C, D and E, representing the employers, and G, H, I, J and K, representing the workmen, as members of said tribunal, who each are qualified to act thereon, pray that a license for a tribunal in the———trade may be issued to said persons named above.

Employers.	Names.	Residence.	Works.	No. of employees.

Employes.	Names.	Residence.	By whom employed.

SEC. 11. The license to be issued upon such petition may be as follows:

State of Ohio,
 ———County, } ss.

WHEREAS, The joint petition and agreement of four employers (or representatives of a firm, corporation or individual, employing forty men, as the case may be), and forty workmen has been presented to this court (or if to a judge in vacation so state), praying the creation of a tribunal of voluntary arbitration for the settlement of disputes in the———trade within this county, and naming A, B, C, D and E, representing the employers, and G, H, I, J and K, representing the workmen. Now, in pursuance of the statutes for such case made and provided, said named persons are hereby licensed and authorized to be and exist as a tribunal of voluntary arbitration for the settlement of disputes between employers and workmen for the period of one year from this date, and they shall meet and organize on the———day of———, A. D.———, at———.

Signed this———day of———, A. D.———.

———Clerk of the Court of Common Pleas———County.

SEC. 12. When the tribunal agrees to submit a matter in controversy to the umpire, it may be in form as follows:

We, A, B, C, D and E, representing employers, and G, H, I, J and K, representing workmen, composing a tribunal of voluntary arbitration, hereby submit and refer unto the umpirage of L (the umpire of the tribunal of the —trade.) the following subject-matter, namely: [Here state fully and clearly the matter submitted.] And we hereby agree that his decision and determination upon the same shall be binding upon us, and final and conclusive upon the question thus submitted; and we pledge ourselves to abide by and carry out the decision of the umpire when made.

Witness our name this—day of —, A. D.—.

[Signatures.]

SEC. 13. The umpire shall make his award in writing to the tribunal, stating distinctly his decision on the subject-matter submitted. And when the award is for a specific sum of money, the umpire shall forward a copy of the same to the clerk of the proper court.

AN ACT

To establish a school of mines and mine engineering in the Ohio agricultural and mechanical college.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the trustees of the Ohio state university be and they are hereby required to establish in said university, a school of mines and mine engineering, in which shall be provided the means for studying scientifically and experimentally the survey, opening, ventilation, care and working of mines; and said school shall be provided with a collection of drawings, illustrating the manner of openings, working and ventilating mines and with the necessary instruments for surveying, measuring air, examining and testing the noxious and poisonous gases of mines, and (also) with (the) models of the most improved machinery for ventilating and operating (all the various kinds of) mines with safety to the lives and health of those engaged. Said school shall also be provided with complete mining laboratories, for the analysis of coals, ores, fire-clays and other minerals, and with all the necessary apparatus for testing the various coals, ores, fire-clays, oils, gases, and other minerals.

Ohio State university, establishment of a school of mines.

Course of study; school apparatus, etc.

SEC. 2. Said trustees shall employ competent persons to give instruction in the most improved (and) successful methods of opening, (and operating), surveying and inspecting mines, including the methods and machinery employed for extracting coal, ore, fire-clay, oil, gas and other minerals from the pit's mouth and for facilitating the ascent and descent of workmen, the draining and freeing of mines from

Employment and duties of instructors.

Cabinet of
specimens to
be kept.

water, the causes of the vitiation of air, the quantities of air required under various circumstances, natural ventilation, mechanical ventilation by flues and fans, and ventilating machinery, the use of air engines, air compressors and coal cutting machinery; also instruction in various uses of coals, ores, fire-clays, oils, gases and minerals, and the methods of testing, analyzing and assaying such minerals; also the methods employed in metallurgy and other processes in the reduction of ores and in refining the qualities of metals particularly iron and steel as shown by practical and laboratory tests; and there shall be kept in a cabinet properly arranged for ready reference and examination suitably connected with said school a collection of specimens from the various mines in the state, which may be sent for analysis, together with the names of the mines and their localities in the state from which they were sent, and the analysis and assay of their properties attached; it shall also be his duty to furnish analysis of all minerals found in the state and to report thereon to him for that purpose by residents of this state.

Appropriation.

SEC. 3. There is hereby appropriated out of the general revenue fund the sum of three thousand, five hundred dollars (\$3,500), to be expended in the equipment, and maintenance of said school of mines, as provided in the first and second sections of this act.

AN ACT

To amend section 1 of an act entitled "An act to compel children under fourteen years of age to attend school a certain length of time each year," of the Revised Statutes of Ohio, passed April 25, 1890.

Children between eight and fourteen years compelled to attend school.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That section 1 of an act entitled "An act to compel children under fourteen years of age to attend school a certain length of time each year," of the Statutes of Ohio, passed April 25, 1890, be amended to read as follows:

SEC. 1. That all parents, guardians and other persons who have care of children shall instruct them, or cause them to be instructed, in reading, spelling, writing, grammar, geography and arithmetic, and every child between the ages of eight and fourteen years shall be required to send any such child or children to a private school for a period of not less than twenty weeks in each school year, commencing September 1, ten weeks of which, at least, shall be consecutive, and shall commence within the first four weeks of the school year; and in special, village and town districts, not less than sixteen weeks in each school year.

of which shall be consecutive, unless such child or children are excused from such attendance by the superintendent of the public, private or parochial schools in cities, or by authority of the board of education in village, special and township districts, when it shall have been shown to the satisfaction of said superintendent, or said board, that the physical or mental condition of such child or children has been such as to prevent his, her or their attendance at school, or that said child or children are taught at home by some qualified person or persons in such branches as are usually taught in primary schools; and in case the said board or superintendent refuses to grant such excuse from attendance, the parent or guardian of such child or children shall have the right to appeal from the decision of the board to the probate court of the county, on giving bond, within ten days after such decision, to the approval of said court, to pay all costs made therein, and the decision of said court in the matter shall be final; provided, that all youths between eight and sixteen years of age, not engaged in some regular employment, shall attend school for the full term the schools of the district in which they reside are continued in the school year, unless excused for the reasons named in this section, and if the parents or guardians having legal charge of such youth shall fail to send these youth to school regularly for said full term, or said youth shall absent themselves from school without satisfactory excuse, said parents and guardians and said youth shall be subject to the provisions and penalties of section 8 of this act.

SEC. 2. That no child under the age of fourteen years shall be employed by any person, company or corporation during the school term, and while the public schools are in session, unless the parent, guardian, or other person having care of such child, shall be able to give substantial proof that he or she has fully complied with the requirements of section 1 of this act, or that such child has completed the usual course of primary and grammar grades in some public or private school, and such person, company or corporation shall demand such proof before giving employment to any minor, and shall make a record of said proof given, and shall be required, upon the request of the officer (hereinafter provided for) to allow said officer to examine the said record, and also the record as provided for in section 6986aa of the Revised Statutes, and any person, company or corporation employing any child contrary to the provisions of this act shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action for debt in any court, or before any justice of the peace having jurisdiction, and such action shall be brought in the name of the clerk of the board of education.

SEC. 3. That all minors over the age of fourteen, and under sixteen years, who cannot read or write the English language, shall be required to attend school at least one-half of each day, or to attend some evening school organized and maintained by the board of education, or to take regular

Unlawful to employ children under fourteen years except under certain conditions.

Regarding minors over fourteen and under sixteen who cannot read and write English.

private instruction from some person qualified, in the opinion of the superintendent of schools in cities, and the clerk of the board of education in special village and township districts to teach such branches until he or she shall obtain a certificate from the superintendent of schools in cities, and the clerk of the board of education in special village and township districts, certifying that said minor can read at sight and write legibly simple sentences in the English language, and every person, company or corporation having such minor in employment shall be required to exact such school attendance from such minor, and be prepared, upon demand of the hereinbefore mentioned officer, to furnish evidence that such minor does comply with the requirements of this act, and any person, company or corporation failing or neglecting to exact such school attendance from such minors, shall be liable as provided for in section 2 of this act; provided, such person, company or corporation shall not have made provision for the private instruction of such minors.

Where children have been discharged from employment by reason of this act.

SEC. 4. That every parent, guardian or other person having charge or control of any child under the age of sixteen who has been discharged from any business in order to be afforded an opportunity to receive instructions or schooling shall send such child to some public or private school until such child shall have acquired such instructions as section 3 of this act requires, and in case of failure on the part of said parent, guardian or other person to comply with the provisions of this section and of section 1 of this act, unless such child shall have been excused from such attendance by the superintendent of public schools or the clerk of the board of education in special village and township districts for reasons stated in section 1 of this act, such parent, guardian or other person shall be deemed guilty of a misdemeanor, and shall, on conviction, be liable to a fine of not less than five dollars or not more than twenty dollars for the first offense, not less than twenty for each subsequent offense, or to imprisonment for not less than one month nor more than three. The said fines, when paid, to be added to the public school funds of such school district in which the offense occurs.

Habitual truants.

SEC. 5. That all children between the ages of seven and fourteen years who are habitual truants from school, or while in attendance at any public or private school are incorrigible, vicious or immoral in conduct; and all children between said ages, and all minors between the ages of fourteen and sixteen who cannot read and write the English language, who absent themselves habitually from school, or who while in attendance at any public or private school are incorrigible, vicious or immoral in conduct, or habitually wander about the streets and public places during school hours, having no business or lawful occupation, shall be deemed juvenile disorderly persons and subject to the provisions of this act.

SEC. 6. That in cities of the first and second class board of education of said cities shall be required to employ one or more truant officers to assist in the enforcement of this act, said truant officer to be vested with police powers, and shall be authorized to enter factories, workshops, mills, and all other places where children may be employed, to perform such other services as the superintendent of schools or the board of education may deem necessary to the preservation of the morals and good conduct of school children and for the enforcement of this act, and in special village and township districts the board of education shall be required to appoint some constable or other person as truant officer, with same power as said officers have in said cities, and the compensation of such officers shall be fixed by the board of education.

Truant officers
to be employed
in certain
cities.

SEC. 7. That the truant officer shall make daily reports to the superintendent of public schools during the school term in cities, and to the clerk of the board of education as often as the clerk shall require it to be done in special village and township districts, and he shall also keep a record of his transactions, subject to the inspection of the members and officers of the board of education and it shall be the duty of the clerk of the board of education to provide suitable blanks for said truant officer.

Truant officers
to make daily
reports.

SEC. 8. That it shall be the duty of all truant officers to examine into all cases of truancy when any such come before their notice, or when requested to do so by the superintendent of public schools, or by the board of education, and to warn such truants, their parents or guardians, in writing, of the final consequences of truancy if persisted in, and also to notify the parent, guardian, or other person having the charge or control of any child between the ages of eight and fourteen years, that the said child is not attending any school, and to require said parent, guardian or other person to cause the said child to attend some recognized school within five days from said notice, and it shall be the duty of said parent, guardian or other person having the legal charge and control of said child, to cause the attendance of said child at some recognized school; if said parent, guardian or other person having the legal charge and control of said child, shall willfully neglect, fail or refuse to cause said child to attend some recognized school, it shall be the duty of said officers to make, or cause to be made, a complaint against said parent, guardian or other person having the legal charge or control of such child, in any court of competent jurisdiction in the city, special, village or township district, in which the offense occurred, for such refusal, neglect or neglect, and upon conviction thereof said parent, guardian or other person, as the case may be, shall be punished by a fine of not less than five dollars nor more than twenty dollars, or the court may in its discretion, require persons so convicted to give bond in the penal sum of one hundred dollars, with one or more sureties to be approved by the court, conditioned that said persons so convicted shall

Duties of
truant officers.

cause the child or children under his or her legal control to attend some recognized school within the time thereafter, and to remain at said school during the time prescribed by law; provided, that if said parent, guardian or other person in charge of such child shall prove incapable of causing said child to attend said recognized school, then said parent, guardian or other person shall be discharged from said court, upon complaint of said truant officer or other person, that said child is a juvenile disorderly person as defined in section 5 of this act, proceed to hear such complaint, and if said court shall determine that said child is a juvenile disorderly person within the meaning of section 5 of this act, such child shall be deemed guilty of a misdemeanor, and said court shall thereupon sentence said child to serve his or her term in the juvenile reformatory; provided, that no child or children under the age of ten years old shall be sentenced by any court to serve their term in the juvenile reformatory; and that, where in the judgment of the board of trustees of any such home, it shall be declared by resolution at a regular meeting by them held, that the character of any child thus sentenced and kept at such home is so bad as to be detrimental and harmful to the good morals of other children at such home, said board of trustees are hereby authorized and empowered to remove such child or children to the boys' industrial school at Lancaster or the girls' industrial home at Delaware, Ohio, as may be; nor shall such child or children be kept at such home beyond the period prescribed in section 1, or until such child shall arrive at the age of sixteen years, unless discharged by the board of trustees of said reform home. Provided, however, that said sentence may be suspended in the discretion of the court, for such time as said child shall regularly attend school and properly depend upon himself or herself. It is further provided that if for any reason the parent, guardian or other person having charge of such juvenile disorderly person, as defined in this act, shall fail to cause such juvenile disorderly person to attend said recognized school, then complaint against such juvenile disorderly person may be made, heard and tried and determined in the same manner as provided for in case of the parent's inability to cause said juvenile disorderly person to attend said recognized school. * *

Proceedings
when this act
is violated.

SEC. 9. That it shall be the duty of officers employed or appointed under this act to assist in the enforcement thereof, to institute, or cause to be instituted, proceedings against any parent, guardian or other person having control or charge of any child, or corporation violating the provisions of this act; provided, that this section shall not be operative in any school district where there are sufficient accommodations to seat children compelled to attend school under the provisions of this act, and that no prosecution shall be instituted against any parent, guardian or other person or child in charge of such, unless they have received due notification from an officer empowered by this act that they are acting in violation of this act.

SEC. 10. When any truant officer shall discover to his satisfaction any child under the age of fourteen years, wholly or partially dependent upon his or her own labor for living, or who shall be the support of others unable to provide for their own sustenance, or when in the judgment of the superintendent of the schools, or of the board of education, it may be necessary for such child to contribute to the support of the family of which he or she is a member, it shall be the duty of said truant officer to report such case to the proper authorities, whose duty it is to look after and care for the poor, and to endeavor to obtain such relief as may release such child from labor for such length of time each year as will be required for compliance with section 1 of this act, but such child shall not be declared a pauper or removed to any infirmary, reformatory or children's home, unless he or she shall willfully neglect to take advantage of the provisions made by said truant officer for his or her relief and instruction, and said truant officer failing to obtain such relief, the superintendent of schools, or the board of education, may make suitable arrangements for the private instruction of such child while so adversely conditioned.

When this act may be suspended for a time.

SEC. 11. That it shall be the duty of all principals and teachers of all schools, public and private, to report to the clerk of the board of education of the city, special village or township districts in which schools are situated, the names, ages, and residence of all pupils in attendance at their schools, together with such other facts as said clerk may require, in order to facilitate the carrying out of the provisions of this act and the said clerk shall furnish blanks for said purpose, and said report shall be made in the last week of September, December, February and April in each year; and it shall be the further duty of said principals and teachers to report to the truant officers, the superintendent of schools or the clerk of the board of education, all cases of idleness or incorrigibility in their respective schools as soon after these offenses shall have been committed as practicable.

Duty of teachers and principals under this act.

SEC. 12. That when any of the provisions of this act are violated by a corporation, proceedings may be had against any of its officers or agents of said corporation, who in any way participate in, or are cognizant of such violation by the corporation of which they are the officers or the agents, and said officers or the agents shall be subject to the same penalties as individuals similarly offending.

When corporations violate this act.

SEC. 13. Any person or officer mentioned in this act, and designated as having certain duties to perform in the enforcement of any of its provisions, neglecting to perform any such duties, shall be liable to a fine of not less than twenty-five dollars, nor more than fifty dollars for each and every offense; and mayors, justices of the peace and probate judges shall have jurisdiction to try the offenses described in this act, and their judgment shall be final.

Penalty.

Relating to
other statutes

SEC. 14. Any provision of statutes in force when this act takes effect, which conflicts with any provisions of this act, shall, the extent it is inconsistent with the latter, and not otherwise, be held to be superseded by this act. The provisions of this act shall apply to children entitled under existing statutes to attend school at the institution for the education of the blind, and the deaf and dumb. Other provisions of the statutes in force, relating to school affairs, shall not be affected by this act, sections 4023, 4024 and 4025 of the Revised Statutes are hereby repealed.

Passed April 25, 1890.

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**ANNUAL REPORT to the
Governor of the State of Ohio**

**Chief Inspector
of Mines**



for the Year Nineteen Hundred and One



Twenty-Seventh Annual Report

OF THE

Chief Inspector of Mines

TO THE

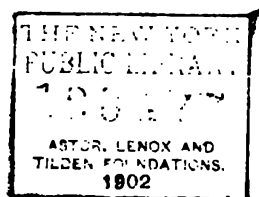
Governor of the State of Ohio

FOR THE

YEAR 1901.



COLUMBUS, OHIO:
FRED. J. HEER, STATE PRINTER,
1902



COLUMBUS, OHIO, August 6, 1902.

Excellency, GEO. K. NASH, Governor of Ohio.

R: — As provided for in Section two hundred and ninety-three of the Re-
tatutes relating to Mines and Mining, I hereby have the honor to submit
nty-seventh annual report of this Department.

ie statistical portion of this report has been compiled in accordance with
ndar year, while that partion relating to the inspection of mines dates
ovember 15, 1900, to November 15, 1901.

Respectfully submitted,

E. G. BIDDISON,
Chief Inspector of Mines.

Annual Report.

The following is a general summary giving the principal facts relating to the Coal, Iron Ore, Limestone and Fire Clay Industries coming under this Department, as compiled from statistics received during the year 1901.

Number of counties producing coal.....	30
Number of counties producing iron ore.....	4
Number of counties producing limestone.....	41
Number of counties producing fire clay.....	19
Total output of coal for the year 1901.....	20,321,290
Total output of iron ore for the year 1901.....	41,325
Total output of fire clay for the year 1901.....	1,337,181
Amount of coal produced by the use of machinery.....	10,489,814
Amount of coal produced by the pick.....	9,831,476
Number of mining machines in use during the year 1901.....	429
Number of mines using mining machines.....	108
Number of counties in which mining machines are in use.....	13
Number of persons engaged in the coal industry.....	33,505
Number of miners employed during the year.....	24,901
Number of day hands.....	8,604
Number of hands operating mining machines.....	1,679
Number of hands following mining machines.....	2,078
Amount of powder consumed in the production of coal by the number of firms reporting (kegs).....	249,861
Amount of coal produced from the use of powder.....	14,674,427
Number of mines in the state.....	1,006
Number of mines in operation during the year 1901.....	947
Number of new mines opened up during the year 1901.....	88
Number of mines suspended during the year 1901.....	59
Number of mines abandoned during the year 1901.....	58
Number of inspections made during the year.....	1,668
Number of sets of scales tested during the year.....	137
Number of permanent improvements made during the year.....	208
Average number of days worked during the year 1901.....	178 1-6
Number of casualties during the year.....	514
Number of fatal accidents.....	72
Number of serious accidents.....	276
Number of minor accidents.....	166
Number of tons of coal mined to the life lost.....	232,240

GENERAL COMPARISONS OF THE SUMMARY OF 1901 AS COMPARED WITH 1900.

The year 1901 surpassed all others in the production of coal, the entire output being 20,321,290, a gain of 894,641 tons over that of the previous year. Ten millions four hundred and eighty-nine thousand eight hundred and fourteen tons of the entire output of coal was mined by the use of machinery. This shows a gain of 1,032,027 tons compared with the preceding year.

The number of miners employed during the year 1901 shows a gain of 628 when compared with the year 1900, and a gain in the number of day hands of 1195.

The entire number of mines in the state is reported to be 1006 for the year ending 1901. Of this number 947 were in operation during the year. Eighty-eight new mines were opened up, fifty-nine suspended operations during the year, and fifty-eight were worked out or abandoned.

The District Mine Inspectors in charge of the seven districts into which the state is divided made 1668 visits to the mines under their supervision. Scales to the number of 137 were tested as compared with 131 in the year 1900.

The number and character of the permanent improvements made during the year that has just closed are as follows: Two hundred and eight permanent improvements were made classified into the following: Forty furnaces were built, 45 fans erected, 66 air shafts were sunk, 31 second openings were made, 11 safety catches applied, 5 stairways built, 7 speaking tubes inserted and three ventilating baskets were hung in air shafts to improve the ventilation.

The average time worked for the year was 178 1-6 days, a gain of 49-10 as compared with the previous year.

The output of fire clay shows a decrease of 135,907 tons. The Iron Ore Production when compared with the year 1900 shows a decrease of 10,941 tons.

The Limestone Industry for the year shows gains in six of the classifications into which the industry is divided and losses in three. Gains occur in the amount of limestone burned for lime, fluxing, dimension, building, piers and protection and macadam. Losses occur in paving, flagging and curbing. The returns show gains in the number of persons employed in the industry as well as in the number of days worked for the year.

There was no change in the personnel of the Department during the year 1901. A detailed description of the mines of the state employing more than ten men is embodied in this report, classified by counties which compose the Seven Districts into which the State is divided. There is also a detailed list of the firms operating coal, fire clay and iron ore mine

and limestone quarries with their respective postoffice addresses. The **Mining Laws** are also published in this report as a means of ready reference for persons desiring information on the Statutes regulating the operating of coal mines. The index follows lastly.

COAL PRODUCTION FOR THE YEAR.

"Fuel is fire unborn, and fire is life or death to a nation. It therefore, no little thing when a nation reigns supreme in the Product of this primeval creative energy of all civilization." For the first time in the year 1899 the United States surpassed Great Britain in the production of Coal, and at the close of the year 1901, she exceeded production of any previous year and maintained the supremacy attained in 1899.

American bituminous coal is already playing an important part in the export trade, and is being received with favor in European competition with the Welsh product. It has only been a few years ago that American coal was practically unknown to European markets, when during 1901 our soft coal was exported to eleven countries of Europe. The scarcity of the Welsh product caused by the Boer war gave impetus to the market for our soft coal in Europe, and it seems to have found a permanent market there.

During 1901 our soft coal was exported to fifty countries, and American coke was shipped to twenty-two foreign countries.

According to the United States Geological Survey the entire output of coal for the year 1901 amounted to 292,240,758 short tons with a valuation of \$348,813,831. As compared with the year 1900 when the output was 269,881,827 short tons worth \$306,891,364, making an increase of 22,358,931 short tons, or eight per cent. in quantity, and of \$41,922,467, or 13.6 per cent. in value.

Of the twenty-seven states in which coal is produced, all except four show an increase in the amount produced. The output of coal in the United States for the year 1901 was greater by from 20,000,000 to 25,000,000 (long tons) than the output of Great Britain; 80 per cent greater than Germany; nearly seven times that of Austria Hungary, and more than eight times that of France.

It is a fact beyond question that the year that has just closed has been one of universal prosperity, not only in the Industry of Coal to which this report is devoted, but to all other industries as well.

The year opened up with conditions good so far as the demand for coal was concerned, and all labor well employed. During the summer of 1901 the soft coal market was dull. This was probably due to inability at times to move the tonnage, and perhaps to the strike of iron and steel workers, but at the close of the season the trade was up to the top notch of production, the demand being so great as to deplete the supply of mine cars much earlier than the previous year and to a more intense degree.

The year has been notable for combines, no state being free from this feature. This means a new era for the American coal trade, and

the day of numberless small concerns has passed and with them the bitter competition which formerly existed.

The year has also been a notable one from the fact that there was no contention between operators and mine workers, due to the agreement made in January between the miners and operators, when with everything taken into consideration the wage rates were the highest ever paid in the coal mining industry. Whenever differences of a local nature did occur, there existed a policy of reasonableness governing both sides which tended to settle matters agreeably to all concerned in the controversy.

Ohio ranks fourth as a coal producer; Pennsylvania occupying first place in the amount of coal produced; Illinois second, and West Virginia third.

The total coal tonnage of Ohio for the year 1901 was 20,321,290, a gain of 894,641 over that of the year 1900. The appended table separates the total production into the several classifications of lump, nut, and pea and slack. The amount of lump coal mined in 1901 is shown to be 14,676,337, a gain of 472,067 over the amount of 1900.

The nut coal mined during the year was 2,218,601, a slight gain of 600 tons over the amount so produced in 1900.

The total amount of pea and slack produced in 1901 was 3,426,352, which shows a gain of 451,964 tons compared with the previous year.

Athens county for the year 1901, as well as for the year 1900, heads the list in the production of coal. Eight new mines were opened up in this county and mining machines installed in five additional mines. The amount of coal produced in Athens county during 1901 was 3,066,533 tons, a gain of 471,674 tons over last year's production. This is the greatest amount of coal that has ever been produced by any county during the history of the department.

Perry county holds second place in the number of tons of coal produced, the amount being 2,563,051, a gain of 45,793 tons. Hocking county ranks third in the production of coal, producing 2,348,809 tons, a gain of 37,190 tons. Jackson county, which for several years was one of the greatest coal producers, dropped to the fourth place in point of production, mining 2,141,466 tons, or a loss of 177,855 as compared with the amount produced in that county during 1900.

Guernsey county is fifth in the amount of coal produced, mining 2,094,887 tons, a gain of 190,506 over the year 1900. Belmont, Jefferson, Tuscarawas, Stark and Columbiana ranking in the order named, each produced over a million tons of coal. The combined output of these ten counties amount to 18,229,142, or 89 7-10 per cent. of the entire output of the State.

The greatest gains occur in Athens county, the amount being 471,674 tons, Jefferson following with a gain of 332,000 tons. This unprecedented gain in the output of coal in Jefferson county was in all

probability due to the large number of mines opened up during the year which were operated on an extensive scale, and also the introduction of a number of mining machines in the mines.

Guernsey county ranks third in gains, which amounted to 190,500 tons, followed by Harrison with a gain of 75,760. Harrison county which has in times past been a small producing county, but owing to extensive new mines which have installed mining machinery, showed a gain of 75,760 tons, or an increase in point of production of 200 per cent.

Columbiana county gained 74,425 tons in point of production, and Tuscarawas was 57,385 tons. Of the larger counties which show loss Jackson comes first, producing 177,855 tons less in 1901 than in the year 1900; Stark county 101,139, Muskingum 85,172, and Mahoning 56,583 tons.

The Hocking Valley District, which is composed of the counties of Hocking, Athens and Perry produced a total tonnage of 7,978,433 tons or 39 1-4 per cent. of the entire output of coal. This is an increase of 544,677 tons when compared with the production of these counties during 1900.

Gains occur in sixteen counties, the amount being 1,420,440 tons. Losses occur in fifteen counties, the total loss being 525,799 tons.

The second table is designed to show the gain and loss in the coal production of each county as compared with the preceding year.

The third table gives the production of coal from the year 1872 to 1901, inclusive.

**SHOWING THE COAL PRODUCTION OF THE STATE BY
COUNTIES DURING THE YEAR 1901.**

Counties.	Tonnage for 1901.			Total.	Rank in pro- duction.
	Lump.	Nut.	Pea and Slack.		
.....	2,365,600	223,322	477,611	3,066,533	1
.....	1,016,976	155,852	372,004	1,544,832	6
.....	171,052	37,912	45,546	254,510	13
iana	510,068	124,789	157,676	792,533	10
on	232,851	50,809	76,975	360,635	11
.....	11,286	368	4,086	15,740	26
v	1,447,359	256,516	391,012	2,094,887	5
n	76,684	13,342	21,821	111,847	18
.....	10,411	3,936	2,201	16,548	25
f	1,819,561	174,576	354,732	2,348,869	3
.....	1,546,893	331,091	263,482	2,141,466	4
n	896,786	163,676	242,846	1,303,308	8
ce	114,770	21,953	6,955	143,678	16
ag	39,245	5,525	7,995	52,765	22
.....	133,867	24,039	25,485	183,391	15
.....	199,524	16,116	40,252	255,892	12
.....	22,490	4,735	6,279	33,504	23
.....	308	.....	.....	308	30
rum	162,812	28,903	34,660	226,375	14
.....	62,429	11,251	9,164	82,844	21
.....	1,896,833	231,163	435,055	2,563,051	2
.....	65,944	9,068	11,769	86,781	20
.....	8,153	2,196	.....	10,349	28
.....	792,555	101,780	154,758	1,049,093	9
.....	97,327	8,485	17,729	123,541	17
ll	9,972	725	1,451	12,148	27
was	873,192	200,353	251,025	1,324,570	7
.....	65,138	13,588	9,298	88,024	19
gton	1,420	189	129	1,738	29
.....	24,830	2,343	4,357	31,530	24
totals	14,676,337	2,218,601	3,426,352	20,321,290	

TABLE SHOWING THE COAL TONNAGE OF THE STATE FOR
AS COMPARED WITH THE YEAR 1900.

Counties.	1900.	1901.	Gain.
Athens	2,594,859	3,066,533	471,674
Belmont	1,595,369	1,544,832	.....
Carroll	205,641	254,510	48,869
Columbiana	718,108	792,533	74,425
Coshocton	366,145	360,635	.....
Gallia	16,138	15,740	.....
Guernsey	1,904,381	2,094,887	190,506
Harrison	36,087	111,847	75,760
Holmes	12,966	16,548	3,582
Hocking	2,311,679	2,348,869	37,190
Jackson	2,319,321	2,141,466	.....
Jefferson	971,209	1,303,308	332,099
Lawrence	112,873	143,678	30,805
Mahoning	109,348	52,765	.....
Medina	152,767	183,391	30,624
Meigs	249,060	255,892	6,832
Morgan	29,954	33,504	3,550
Monroe	2,933	308	.....
Muskingum	311,547	226,375	.....
Noble	89,046	82,844	.....
Perry	2,517,258	2,563,051	45,793
Portage	103,241	86,781	.....
Scioto	11,657	10,349	.....
Stark	1,150,232	1,049,093	.....
Summit	122,988	123,541	553
Trumbull	19,181	12,148	.....
Tuscarawas	1,267,185	1,324,570	57,385
Vinton	77,231	88,024	10,793
Washington	2,679	1,738	.....
Wayne	45,566	31,530	.....
Totals	19,426,649	20,321,290	1,420,440
Net gain			894,641

SHOWING THE COAL OUTPUT OF THE STATE FROM 1872
TO 1901 INCLUSIVE.

Years.	Output.	Gain.	Loss.
.....	5,313,294	.....	.....
.....	4,550,028	.....	76,526
.....	3,267,585	.....	128,224
.....	4,864,259	1,596,674	.....
.....	3,500,000	.....	1,364,259
.....	5,250,000	1,750,000	.....
.....	5,500,000	250,000	.....
.....	6,000,000	500,000	.....
.....	7,000,000	1,000,000	.....
.....	8,225,000	1,225,000	.....
.....	9,450,000	1,225,000	.....
.....	8,229,429	.....	1,220,571
.....	7,650,062	.....	579,367
.....	7,816,179	166,117	.....
.....	8,435,211	619,032	.....
.....	10,301,708	1,866,479	.....
.....	10,910,946	619,338	.....
.....	10,907,385	.....	3,561
.....	11,788,859	881,474	.....
.....	13,050,181	1,261,328	.....
.....	14,599,908	1,549,721	.....
.....	14,828,097	228,189	.....
.....	11,910,219	.....	2,917,878
.....	13,683,879	1,773,660	.....
.....	12,912,608	.....	711,271
.....	12,448,822	.....	463,786
.....	14,058,155	1,609,333	.....
.....	15,908,934	1,850,799	.....
.....	19,426,649	3,517,715	.....
.....	20,321,290	894,641	.....

MACHINE MINED COAL.

The amount of coal mined by the use of machinery in the state for the year 1901 amounted to ten million, four hundred and eighty-nine thousand, eight hundred and fourteen tons. This shows a gain of one million, thirty-two thousand and twenty-seven tons so produced in the year 1900.

Mining machines were in use in thirteen of the coal producing counties of the state, Harrison being added to the list of mines using machines to mine the coal, and the discontinuance of the use of same in the counties of Muskingum, where in Werners No 3 mine, in which mining machines were in use the previous year, was abandoned, and in Hutson No. 4 mine, located in Portage county, also abolished the use of mining machinery.

The accompanying table shows the amount of coal mined by the use of machinery in each county during the year 1901, and the number of hands operating and following machines during the year. The number of hands operating mining machines during 1901 is shown to be one thousand, six hundred and seventy-nine, a gain of five hundred and sixty-two over the number so engaged during the year 1900. The number of hands following machines as reported during 1901 was nine thousand and seventy-eight, a gain of six hundred and ninety-four over the preceding year.

Athens county in the year 1901 as well as the year 1900, leads in the number of hands following and operating mining machines, the total number being 3393, a gain of 668 persons. The entire output of coal mined by the same was two million, eight hundred and eighteen thousand, seven hundred and seventy-nine tons.

Hocking follows second with a total of one thousand, nine hundred and forty-four hands, producing two million, two hundred and sixty-eight thousand, seven hundred and fifteen tons; Guernsey ranks third, producing one million, nine hundred and eleven thousand, six hundred and twenty tons, and Perry fourth, with one million, seven hundred and seventeen thousand, eight hundred and ninety-one tons.

Gains occur in nearly all of the counties in which mining machines were in use, the most notable occurring in Athens, Guernsey and Jefferson, where gains to the amount of 834,085 tons are shown.

Hocking county shows a small loss of three thousand one hundred and thirty-one tons.

The second table shows the amount of coal produced by the use of machinery from the year 1880 to 1901, inclusive.

: SHOWING THE ANNUAL PRODUCTION OF MACHINE MINED
AL SINCE THE INTRODUCTION OF ELECTRICITY INTO THE
NES OF THE STATE.

Years.	Output.	Gain.	Loss.
.....	900,000	.....	.....
.....	1,148,499	248,499	.....
.....	1,654,081	505,632	.....
.....	2,239,080	584,999	.....
.....	2,553,074	313,994	.....
.....	2,555,466	2,392	.....
.....	3,120,456	564,990	.....
.....	3,368,349	247,893	.....
.....	4,106,124	737,775	.....
.....	5,252,598	1,146,474	.....
.....	6,741,060	1,488,462	.....
.....	9,457,777	2,716,717	.....
.....	10,489,814	1,032,037	.....

E SHOWING THE AMOUNT OF COAL MINED BY MACHINERY,
IE TIME WORKED, AND THE NUMBER OF MEN EMPLOYED
MACHINE MINING DURING THE YEAR 1901.

nties.	Days worked.	Hands operating machines.	Hands following machines.	Lump.	Nut.	Pea and slack.	Totals
.....	185	447	2,926	2,208,208	196,383	414,188	2,818,779
t	174	47	179	168,974	15,036	66,364	250,374
.....	193	26	104	52,492	4,666	20,014	77,172
iana ...	138	28	234	204,242	45,052	66,149	315,443
ty	227	191	1,272	1,400,011	210,486	301,123	1,911,620
n	30	4	10	3,133	800	1,080	5,013
g	271	183	1,761	1,757,877	166,901	343,937	2,268,715
.....	186	70	358	338,873	34,006	42,323	415,202
n	202	474	444	336,277	50,578	67,031	453,886
.....	209	6	75	40,291	7,252	7,253	54,796
.....	155	172	1,500	1,294,085	120,333	303,473	1,717,891
.....	140	7	40	29,234	3,877	5,030	38,141
was ...	262	24	175	122,088	13,022	27,672	162,782
als	2,372	1,679	9,078	7,955,785	868,392	1,665,637	10,489,814
rage ...	182	.....	.....	.....	.....	.....	.....

MINES IN WHICH MINING MACHINES HAVE BEEN INSTALLED, AND THE NUMBER AND KIND OF EACH.

Coal is now being mined in twenty-two States and Territories by the use of machinery. Within the past ten years the number of firms using machines for mining coal has increased from fifty-one to three hundred and twenty-three; the number of machines used for cutting coal has increased from 545 to 3,907. The amount of coal produced by the use of these machines increased from 6,211,300 tons to 52,790,000 tons.

The number of new types of mining machinery is constantly on the increase, each new type possessing some new feature which distinguishes its action and its capabilities from those that have gone before.

The number of mines in the state of Ohio in which mining machines have been used increased in the year 1901 from 88 to 108, a gain of 20; the total number of mining machines which were in use during the year increased from 362 to 429, or a gain of 67 when compared with the previous year. Of this number 389 were operated by the use of electricity, and 40 from the use of compressed air.

The number of tons of coal mined from the use of mining machines shows an increase from 9,457,777 to 10,489,814 tons, or a gain of 1,032,027 tons.

Mining machines were in use in thirteen of the coal producing counties of the state, Harrison county being added to the list. The use of mining machines was abolished in Werner's No. 3 mine, Muskingum county, which was the only mine in this county using mining machines, and was abandoned during the year. Hutson No. 4 mine, located in Portage county also discontinued the use of mining machines, and this county also disappears from the list of counties in which mining machines were in use. The use of mining machines was discontinued in the Hutson No. 4 mine from the fact that the mine being very wet, and having a bad top it was found that coal could be produced more cheaply under these circumstances, by pick mining after having given the mining machines a trial.

The number of hands operating machines shows an increase from 1,117 to 1,679 over that of last year, or a gain of 562. The number of hands following machines also shows a decided increase from 8,384 to 9,078, or a gain of 694 hands.

During the year 1901 mining machines were introduced into the mines of Athens county as follows: Floodwood, Doanville, McLeish, Imperial and Brooks Hill; in Belmont county, Pultney, Tin Plate, and Crescent; in Carroll county, Heatherington and Magnolia; in Columbus, Pleasant Valley and Elk Run; in Guernsey, Ideal and Leatherwood No. 1; in Hocking county, New Pittsburg No. 7; in Jackson county, Machine and Dayton No. 1; in Jefferson, Laughlin, Edgar No. 1 a

. 2, and West Pittsburg; in Perry county, No. 9, No. 37, Briar Hill
 1 Lady Grange mines.

The use of mining machines was discontinued in the following
 mines which were abandoned during the year: Coe Hill, Athens county;
 Iton No. 1, Jackson county; Werner No. 3, Muskingum county; and
 Superior mine, Perry county. Hutson No. 4, located in Portage county,
 also abandoned the use of mining machines, the cause being set forth
 under the previous article.

A few years ago the operator who opened up a mine and employed
 the mule for a motor power, soon realized that it was necessary to in-
 augurate a plan whereby the coal could be delivered to the tippie without
 the loss of so much time, and that a quicker plan was necessary to
 facilitate the hauling of the coal to the tippie.

The convenience and simplicity of electric haulage was early recog-
 nized, and the increasing demand for motors of this type is ample evi-
 dence that they are able to meet the requirements for which they are
 used in the mines.

The large output of mines has of a necessity called for motors of
 large capacity, and to meet the demand motors are being manufactured
 running in weight from two to twenty tons.

The number of motors used in the mines of this state increased dur-
 ing the year from 50 to 62. The following mines have each in use two
 motors; Phoenix No. 2, Rend's No. 6, No. 10, and Daleton No. 2, in
 Athens county; Crescent No. 2, Belmont county; Slope mine, Colum-
 biana county, has installed three motors; Jefferson county, Dillon No.
 2 mine has also three motors in use, and Long Run No. 1, two motors
 in use; No. 21 mine in Perry county, and Thompson Run East, Tus-
 carawas county, each have two motors in use.

The following table was designed to show the number, manufac-
 turer, motive power, and location of the mines in which mining machines
 and motors were in use, in this state during the year 1901, and the num-
 ber and kind of each.

TABLE SHOWING THE NUMBER, MANUFACTURER, MOTIVE POWER AND LOCATION OF THE MINING MACHINES
AND ELECTRIC MOTORS IN OPERATION IN THE STATE.

Name of Mine.	County.	Electricity.					Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Jacoby.	
Phoenix No. 2.....	Athens		5							(2) Morgan-Gardner.
Rends No. 4.....	"		5							(2) Morgan-Gardner.
Rends No. 6.....	"		5							(2) Morgan-Gardner.
No. 10.....	"		6							(1) Morgan-Gardner.
Hiawatha.....	"	2	6	1						(1) Morgan-Gardner.
No. 16.....	"		3							Sperry Electric.
Bell Run or No. 55.....	"		4							(1) Morgan-Gardner
No. 24.....	"		2							General Electric.
Setalia.....	"		4							(1) Morgan-Gardner.
Oakdale.....	"									(1) Morgan-Gardner.
Minker Run.....	"					5	3			General Electric.
Black Diamond.....	"	2	2							(1) Morgan-Gardner.
Chauncey.....	"		3							(1) Morgan-Gardner.
Elm Rock.....	"		3							(1) Morgan-Gardner.
Greendale New.....	"	4								(1) Link Belt.
Half Moon No. 3.....	"		1							(2) Link Belt.
Daleton No. 1.....	"		6	3						
Daleton No. 2.....	"									
Floodwood.....	"		1							

Continued.

TABLE SHOWING THE

Name of Mine.	County.	Electricity.					Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Jacoby.	
McLeish or No. 31.	"		2							
Imperial	"		1							
Brooks Hill	"	2								
Pulney	Belmont				2					
Crescent	"	6								(2) Jeffrey.
Empire No. 1.	"	4		1						(1) Link Belt.
Empire No. 2.	"		2							(1) Jeffrey.
Nail Mill	"	3	1				10			
Flushing	"									
Glen	"							4		(1) Jeffrey.
Kennon No. 2.	"									
Tin Plate	"	2								
Huff's Run No. 1.	Carroll		4							
Heatherington	"	3								
Magnolia	"									
Slope	Columbiana	2	2							(1) Morgan-Gardner.
New Shaft	"	12	4							(2) Jeffrey.
Pleasant Valley	"			1						
Elk Run	"			2						
Morgan Run	Coshocton									(1) Schlesinger.
Cassingham No. 2.	"									(1) Jeffrey.
Waldbounding	Guernsey	4	3							(1) Jeffrey.
Central	"	3	2							
Ideal	"	4								

TABLE SHOWING THE NUMBER, MANUFACTURER, MOTIVE POWER, ETC. -- Continued.

Name of Mine.	County.	Electricity.					Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Jacoby.	
Cisco	"		3							
Imperial	"		4							
Trail Run	"									
Hartford	"			4						
Klondike	"		3							
Nicholson	"	2								
Porsythe	"	3								
Kings	"		5							(1) Jeffrey. (1) Link Belt. (1) Link Belt.
Old Orchard	"		4							
Little Kate	"		2							
Black Top	"		3							
Leathernwood No. 1	Harrison									
Robyville	"									
Tippecanoe	"									
New Pittsburg No. 1	Hocking	6					9			
New Pittsburg No. 2	"									
New Pittsburg No. 3	"	4	2							
New Pittsburg No. 6	"	2	4							(1) Jeffrey.
New Pittsburg No. 7	"	2								
No. 15	"								2	
Snake Hollow	"	3	4							
Columbus	"	2								(1) Link Belt (1) Link Belt.
Morris No. 2	"	11				4				
Morris No. 3	"									

(1) Jeffrey.
(1) Link Belt.
(1) Link Belt.(1) Jeffrey.
(1) Jeffrey.

(1) Jeffrey.

(1) Link Belt.
(1) Link Belt.

Name of Mine.	County.	Electricity.					Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Jacoby.	
Sand Run	"	4								
Lost Run	"	1	5							
Coalgate	"	1	1							(1) Jeffrey.
Tom Corwin No. 1	Jackson	2	1							(1) Jeffrey.
Machine Coal Co.	"	1	2	1						(1) Jeffrey.
Milton No. 2.	"	12								
Milton No. 3.	"									
Springfield	"	5				2				
Star No. 1.	"							1		
Enterprise	"	3								
Dayton No. 1.	"	8								
Millon No. 2.	Jefferson	4								
Long Run No. 1.	"	6								(3) Jeffrey.
Conner No. 1.	"	4								(2) Jeffrey.
Conner No. 2.	"									(1) Jeffrey.
High Shaft	"		3							
Kelley	"		4							(1) Morgan-Gardner.
Walnut Hill	"		5							(1) Morgan-Gardner.
Brilliant	"	4								(1) Jeffrey.
Edgar No. 1.	"		3							
Edgar No. 2.	"		3							
West Pittsburgh	"			3						
Glenwood	Noble			3						
Rock Run No. 3.	Perry	2	4							(1) Link Belt.

MANUFACTURER, MOTIVE POWER, ETC. -- Continued.

TABLE SHOWING THE NUMBER, MANUFACTURER, MOTIVE POWER, ETC. — Concluded.

Name of Mine.	County.	Electricity.				Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	
No. 21	"		5						(2) Morgan-Gardner.
Congo No. 1	"	14							(1) Jeffrey.
Congo No. 2	"								(1) Jeffrey.
No. 8	"		4						(1) Morgan-Gardner.
Rends No. 3	"		4						(1) Morgan-Gardner.
Upson No. 1	"	3							(1) Jeffrey.
No. 9	"	15							(1) Morgan-Gardner.
Keystone No. 1	"								
Mingo	"	1							
No. 12	"	3							
No. 18	"	13	2						
No. 20	"	1							
No. 3	"								
Keystone No. 2	"								(1) Morgan-Gardner.
No. 37	"		1						
Briar Hill	"	1							
Lady Grange	"	1							
Minglewood No. 2	Stark								(1) Morgan-Gardner
Krause No. 4	"			3					
Thompson Run, East	Tuscarawas	6							(2) Jeffrey.
Thompson Run, West	"								(1) Jeffrey.
East Goshen	"								

NUMBER OF MINES IN OPERATION DURING THE YEAR
1901, AND THE TIME WORKED AS COMPARED WITH
THE YEAR 1900.

The number of mines in operation all or a portion of the time during the year as reported to this department is shown to be nine hundred and forty-seven. This is a loss of fifty-four as compared with the year 1900, when the number was one thousand and one.

The largest number of mines ever in operation was reported during the year 1898, when the number reached eleven hundred and fifty-five; followed by ten hundred and sixty-five which were reported in the year 1899. This number has not been reached since, owing to more time being devoted to the larger mines which require more attention as the number of persons employed in the mines has increased, as well as greater areas being worked out, requiring a systematic method of ventilation to keep the mines up to the standard required by law.

From an examination of the following table it will be seen that the greatest gain in the number of mines in operation occurs in Guernsey county, where the number is seven. Noble has a gain of five. The total gain is given as twenty-three.

Muskingum county shows the greatest loss, the number being nineteen less than for the preceding year, and Columbiana returns a loss of thirteen. The total loss was seventy-seven.

Eleven counties show increases, viz.: Belmont, Carroll, Coshocton, Guernsey, Medina, Meigs, Monroe, Noble, Portage, Trumbull and Wayne.

The number showing losses are sixteen counties as follows: Athens, Columbiana, Gallia, Harrison, Hocking, Jackson, Jefferson, Lawrence, Mahoning, Muskingum, Perry, Scioto, Stark, Summit, Tuscarawas and Vinton.

The average time worked during the year 1901 was 178 1-6 days. When compared with the year 1900, we find a gain in the average time worked of 4 and 9-10 days.

Gains amounting to three hundred and ninety-one days occur in fifteen counties, and losses amounting to two hundred and forty-four days also occurred in the same number of counties. Gains occur in Athens, Belmont, Carroll, Coshocton, Gallia, Guernsey, Hocking, Jefferson, Lawrence, Medina, Meigs, Muskingum, Summit, Vinton and Wayne.

Losses occur in Columbiana, Harrison, Holmes, Jackson, Mahoning, Morgan, Monroe, Noble, Perry, Portage, Scioto, Stark, Trumbull, Tuscarawas and Washington.

The greatest gain occurs in Hocking county, which is fifty-five days, followed by Carroll and Vinton counties each showing an increase of forty-two days.

The greatest loss occurs in Portage and Trumbull counties, where there was a decrease of thirty-eight days each, followed by Holmes, where a loss of thirty-five days occur.

These losses, however, occur in counties which are unimportant, and produce only a small amount of the entire coal production of the state

TABLE SHOWING COMPARATIVELY THE NUMBER OF MINES OPERATED AND DAYS WORKED IN 1900 AND 1901.

Counties.	Number of mines worked in 1900.	Number of mines worked in 1901.	Gain.	Loss.	Average number days worked in 1900.	Average number days worked in 1901.	Gain.	Loss.
Athens	52	51		1	157	185	28	...
Belmont	60	62	2		173	195	22	...
Carroll	21	23	2		181	223	42	...
Columbiana	63	50		13	203	186		1
Coshocton	23	24	1		192	230	38	...
Gallia	5	3		2	149	168	19	...
Guernsey	26	33	7		182	188	6	...
Harrison	53	41		12	137	121		1
Holmes	11	11			230	195		3
Hocking	17	16		1	176	231	55	...
Jackson	73	65		8	172	167		...
Jefferson	49	43		6	161	194	33	...
Lawrence	22	21		1	174	206	32	...
Mahoning	37	32		5	188	172		1
Medina	12	13	1		189	216	27	...
Meigs	31	32	1		165	180	15	...
Morgan	2	2			162	158		...
Monroe	4	5	1		148	132		1
Muskingum	104	85		19	175	199	24	...
Noble	47	52	5		146	135		1
Perry	88	86		2	177	176		...
Portage	4	5	1		209	171		1
Scioto	7	5		2	127	106		1
Stark	75	71		4	185	177		...
Summit	13	12		1	172	174	2	...
Trumbull	7	8	1		163	125		1
Tuscarawas	73	72		1	185	181		...
Vinton	14	12		2	138	180	42	...
Washington	2	2			180	166		...
Wayne	6	7	1		202	208	6	...
Totals	1,001	947	23	77	173 4/15	178 1/6	391	3
Loss				54				

ARGE AND SMALL MINES IN THE STATE, AND THE
NUMBER THAT WERE IN OPERATION DURING THE
YEAR 1901.

In executing the work of the department mines are divided into two classes. Large mines employing more than ten men, and small mines here ten or less than ten are employed.

The large mines, are of a necessity, given the greatest amount of time and attention, although requests or complaints however small the mines may be from which they come, are given attention, and conditions remedied and improved as the case may demand.

The number of large mines in operation as reported to this department was four hundred and thirty-seven. This is an increase of five compared with the previous year.

Jackson county had by far the greatest number of large mines in operation for the year that has just closed, the number reaching forty-eight. However, this number is a loss of eight as compared with the number of mines in operation in that county for the year 1900. Perry follows second with forty-six, a loss of two as compared with 1900. Athens occupies third place with forty-three, or a gain of one over that last year.

The total number of large and small mines in operation during the year 1901 was nine hundred and forty-seven, a loss of fifty-four when compared with the number of same in operation during the year 1900.

Seventeen large mines were suspended, and forty-two small ones closed operations for the year.

There was a loss of seventy-one small mines that were in operation during 1901, and the number so reported for the previous year. The number of small mines that were in operation during the year was five hundred and sixty-nine. The greatest number of small mines that were five are distributed in the following counties, Muskingum with eighty-two. Noble fifty, Perry forty-one, Stark forty-one, and Harrison forty.

TABLE SHOWING THE NUMBER OF LARGE AND SMALL MINES IN THE STATE AND THE NUMBER OF EACH THAT WERE IN OPERATION DURING 1901.

Counties.	Number of mines which employ more than 10 men.	Number of mines which employ less than 10 men.	Total by counties.	Number large mines in operation during 1901.	Number small mines in operation during 1901.	Total number mines in operation during 1901.
Athens	43	9	52	42	9	51
Belmont	31	36	67	29	33	62
Carroll	11	13	24	11	12	23
Columbiana	25	30	55	21	29	50
Coshocton	15	9	24	15	9	24
Gallia	2	4	6	2	1	3
Guernsey	18	17	35	17	16	33
Harrison	3	40	43	3	38	41
Holmes		11	11		11	11
Hocking	16	2	18	15	1	16
Jackson	48	22	70	46	19	65
Jefferson	25	19	44	25	18	43
Lawrence	8	14	22	8	13	21
Mahoning	7	27	34	7	25	32
Medina	8	5	13	8	5	13
Meigs	15	19	34	14	18	32
Morgan	2		2	2		2
Monroe		6	6		5	5
Muskingum	16	82	98	14	71	85
Noble	2	50	52	2	50	52
Perry	46	41	87	46	40	86
Portage	4	1	5	4	1	5
Scioto	1	5	6	1	4	5
Stark	39	41	80	37	37	74
Summit	2	10	12	2	10	12
Trumbull	3	6	9	2	6	8
Tuscarawas	37	39	76	37	35	72
Vinton	6	6	12	6	6	12
Washington		2	2		2	2
Wayne	4	3	7	4	3	7
Totals	437	569	1,006	420	527	947

MINERS AND DAY HANDS.

The universal prosperity experienced in all conditions of labor during the year that has just passed was manifested in the number of persons engaged in the mining industry, as the number engaged was far in excess of that of the previous year.

From statistics bearing on this special subject we ascertained that 505 persons were engaged in and about the mines during the year 1901. There was an increase of 1,823 persons when compared with the number returned during 1900.

The accompanying table has been prepared in such a manner as to separate the number of persons employed in the mining industry into two classes, which are designated as miners and day hands. The class of men known as miners comprises all persons who are engaged in producing coal either by pick or otherwise, such as those operating and following mining machines in addition to those shooting down and loading the coal into mining cars. Day hands embraces all persons employed in and outside of the mine, and who are otherwise engaged in the production of coal, and are paid by the day.

From an examination of the accompanying table we find that a total number of 24,901 persons were engaged as miners during the year. This was an increase of 608 when compared with the previous year. Fifteen counties return gains in the number of miners employed during the year; Athens county, as in the preceding year showing the greatest gain of 615 persons employed as miners, followed by Perry, with a gain of 509, and Tuscarawas, Belmont, and Harrison, in the order named, each employed over 1,000 miners.

The total number of miners employed during the year 1901 by county, showing the greatest number employed in the order named are as follows: Athens, employing 3,720; Jackson, 2,804; Perry, 2,714; Stark, 2,609; and Belmont, 1,930.

The total number of men classified as day hands employed during the year 1901 was 8,604. This number represents a total gain of 527 persons employed by the day when compared with the preceding year. Of this number 668 were employed as inside men, and 527 employed as outside men.

Jackson county leads in the number of day hands employed, the number reaching 1,233, followed by Athens, with 1,217; Perry, 885; Stark county, Guernsey, Belmont and Tuscarawas also show gains in the order named.

The greatest gains in the number of day hands employed by counties are as follows: Stark, 267; Athens, 237; Guernsey, 199; Belmont, 182; Tuscarawas, 120.

NEW MINES OPENED, SUSPENDED AND ABANDONED.

At the close of the inspection year, which extends from November 1900, to November 15, 1901, the returns show that 88 new mines were opened up during the year, 59 suspended operations, and 58 were worked out or abandoned.

When compared with the year 1900, we find that there was a loss of one in the number of mines opened up, 12 more were suspended, and more abandoned.

The greatest number of mines that were suspended during all of the year occur in the counties of Muskingum, where mines to the number of 13 ceased operation; this fact is probably due to the large number of 11 mines located in Muskingum county, and are subject more or less to suspensions; Stark county follows with 6 mines that were suspended during the year, with Belmont, Columbiana and Jackson each reporting 5 mines suspended for the year. Tuscarawas returned 4 mines as being abandoned.

New mines to the number of 88 were opened up during the year just closed, which were distributed in twenty-one counties, Stark county with 16. Athens and Jefferson counties each report 8 new mines opened up during the year, Perry 7, and Belmont and Meigs each reported 6.

Several of these new mines opened up give promise of being among the largest in the state, and are to be operated on an extensive scale.

The number of mines reported to be either worked out or entirely abandoned during the year was 58. The counties of Muskingum, Perry and Stark each reported eight mines abandoned during the year. Athens county follows with 6; Columbiana, 5; and Carroll and Jackson 4 each. A detailed list of mines opened, suspended and abandoned during the year is given in the table which follows, in which the mines are given by counties.

TABLE SHOWING THE NUMBER OF MINES OPENED, SUSPENDED
AND ABANDONED DURING THE YEAR.

Counties.	Opened.	Suspended.
Athens	8	1
Belmont	6	5
Carroll	4	1
Columbiana	4	5
Coshocton	1	
Gallia		3
Guernsey	2	2
Harrison	2	2
Holmes	1	
Hocking		2
Jackson	3	5
Jefferson	8	1
Lawrence	2	1
Mahoning		2
Medina	3	
Meigs	6	2
Morgan		
Monroe		1
Muskingum	5	13
Noble	1	
Perry	7	1
Portage	1	
Scioto		1
Stark	16	6
Summit		
Trumbull	1	1
Tuscarawas	5	4
Vinton		
Washington		
Wayne	2	
Totals	88	59

ETAILED LIST OF NEW MINES OPENED, SUSPENDED
AND ABANDONED DURING THE YEAR.

ATHENS COUNTY.

New mines.	Suspended.	Abandoned.
n No. 1.....	Federal Valley No. 2	Somers No. 2.
n No. 2.....	Somers No. 3.
No. 23.....	Somers No. 4.
ers No. 6.....	Somers No. 5.
Floodwood Shaft.....	Coe Hill No. 2.
eish	Klondike.
erial	
ondale No. 2, West...	

BELMONT COUNTY.

New mines.	Suspended.	Abandoned.
Plate	Franklin	Echo.
ent No. 2.....	Wegee	
ent No. 3.....	Crozier	
ent No. 4.....	Renker Bros	
.....	Elec. Light and Power Co.	
ont County		

CARROLL COUNTY.

New mines.	Suspended.	Abandoned.
r No. 2.....	Ebersole	Linden No. 1.
a Coal .....	.....	Linden No. 6.
Hill .....	.....	Elder.
ington No. 2.....	.....	Starkey No. 1.

COLUMBIANA COUNTY.

New mines.	Suspended.	Abandoned.
Slope No. 2	Anderson	Anderson.
McNabb Shaft	Foster	Hayesville.
Leetonia	Cherry Valley No. 4	Manila.
Strabley No. 2	Sterling	Sterling.
.....	Lacey	State Line No. 2.

COSHOCKTON COUNTY.

New mines.	Suspended.	Abandoned.
Best	Conesville No. 2.
.....	Franklin, West Side.
.....	Wade No. 1.

GALLIA COUNTY.

New mines.	Suspended.	Abandoned.
.....	Small	
.....	Morgan	
.....	Evans	

GUERNSEY COUNTY.

New mines.	Suspended.	Abandoned.
Indian Camp	Guernsey	Pioneer.
Pioneer No. 2	Barton	

HARRISON COUNTY.

New mines.	Suspended.	Abandoned.
He Inoe	Sheets Webb	

HOLMES COUNTY.

New mines.	Suspended.	Abandoned.
lo	Horn No. 2.

HOCKING COUNTY.

New mines.	Suspended.	Abandoned.
.....	Black Diamond Coakley	

JACKSON COUNTY.

New mines.	Suspended.	Abandoned.
r No. 8 No. 4 t	Hurd Slope Garfield, New Klondike Aetna McGinness	Milton No. 1. Tom Rhodes. Emma No. 1. Garfield, New.

JEFFERSON COUNTY.

New mines.	Suspended.	Abandoned.
Edgar No. 1.....	Hill	Diamond No. 2.
Edgar No. 2.....	Wilson.
Russell	
Downer Coal	
Rush Run	
New Diamond No. 4.....	
Rolling Mill No. 3.....	
West Pittsburg	

LAWRENCE COUNTY.

New mines.	Suspended.	Abandoned.
Belfont No. 3.....	Steed	
Hall No. 2.....	.....

MAHONING COUNTY.

New mines.	Suspended.	Abandoned.
.....	Chestnut Hill	Fairview No. 4.
.....	Ruhlman	

MEDINA COUNTY.

New mines.	Suspended.	Abandoned.
Whalen No. 2.....	Whalen No. 1.
Robbins	
Collier	

MEIGS COUNTY.

New mines.	Suspended.	Abandoned.
urg	Rolling Mill No. 1	Minersville.
Summit No. 1 and 2.	Sayles	
ant Valley .....	.....
er .....	.....
ck No. 3 .....	.....
ck No. 4	

MONROE COUNTY.

New mines.	Suspended.	Abandoned.
.....	Steel	

MUSKINGUM COUNTY.

New mines.	Suspended.	Abandoned.
No. 2	Chestnut Valley No. 3	Dewey.
ut Valley No. 3	Eagle	Kings No. 2.
r Shaft	Griener No. 1	East Hill.
inob	Workman	Griener Shaft.
nder, New	Dewey	Rowdock.
.....	Henke	Chestnut Valley No. 1.
.....	Allen	Weller No. 3.
.....	Leyton	Bealer.
.....	Horner	
.....	McConnell & Cox	
.....	Johnson	
.....	Trimble	
.....	Hock	

NOBLE COUNTY.

New mines.	Suspended.	Abandoned.
es	

PERRY COUNTY.

New mines.	Suspended.	Abandoned.
Green Hollow No. 5.....	Bell	Superior or Hobo.
Lady Grange	Block North Side.
Block No. 2.....	No. 51.
Upson No. 2, New.....	Lyonsdale No. 1.
Zanesville No. 3.....	GreenHollow No. 4.
No. 9	Mingo.
Black Diamond No. 3.....	Peacock.
.....	Black Diamond No. 2.

PORTAGE COUNTY.

New mines.	Suspended.	Abandoned.
Hutson No. 6.....	Hutson No. 2.

SCIOTO COUNTY.

New mines.	Suspended.	Abandoned.
.....	Gifford	

STARK COUNTY.

New mines.	Suspended.	Abandoned.
Whippoorwill	Naysmith	Massillon Standard.
Geise & Gainey.....	Baum	Hern Brook.
Indian Run	Fox No. 12	Willow Springs.
Stark	Fox Run	Failor.
Peacock No. 3.....	Slusser	Minglewood No. 2.
Pigeon Run	Sefert	Drake.
Crescent		Brush Hill.
Davis No. 2.....		West Massillon No. 3.
Cameron		
Sherwood		
Oakwood No. 16.....		
No. 15		

STARK COUNTY — Concluded.

New mines.	Suspended.	Abandoned.
te Oak	
e No. 13.....	
ler	

TRUMBULL COUNTY.

New mines.	Suspended.	Abandoned.
c	Applegate	

TUSCARAWAS COUNTY.

New mines.	Suspended.	Abandoned.
Dover	Dunlavey	Swan.
istle No. 2.....	Krantz	Tunnel No. 5.
Goshen	Lawhead & Tufferd	
eadow No. 2.....	Penna. Iron & Coal Co.	
eadow No. 3.....	.....

WAYNE COUNTY.

New mines.	Suspended.	Abandoned.
ebanon No. 1.....	Wayne.
No. 14.....	

INSPECTIONS OF MINES MADE DURING THE YEAR 1901.

At the close of the fiscal year ending November 15, 1901, the records of this Department show that the several District Mine Inspectors made 1,668 visits to the mines under their immediate supervision. This represents an average of nearly 240 visits to each District Mine Inspector.

The number of visits made to the different mines of the state by the Inspectors was 38 less than the number made during the year 1900. It has been the policy of this Department to impress upon the Inspectors the necessity of spending more time in the inspection of large mines, where a greater number of men are employed, and where greater areas are worked over, as the importance of good ventilation in cases of this kind is not to be overlooked, and should receive special attention. This probably accounts for the slight falling off in the number of inspections made for the year that has just closed. However, it has been the aim of the Mining Department, and we take pleasure in acknowledging the hearty co-operation of the several District Mine Inspectors, who have so materially aided us, to give all requests of whatever nature, prompt attention. We believe that the condition of the mines throughout the State as a whole, is satisfactory to a high degree to the men employed therein.

All requests and suggestions given by the District Mine Inspectors at the mines which are visited by them and reported to this office have been in turn repeated from the Head Office. It is highly gratifying to acknowledge the promptness with which these requests have been carried out on the part of the Operators, who have manifested a most cheerful disposition on their part to place their mines not only in accordance with the mining statutes regulating the operating of coal mines, but also realize that only under the most auspicious conditions can the best results be obtained from every standpoint of the mining industry.

The Inspectors who have charge of the different districts are men who have had years of practical experience in mining coal. As a result of their labors we feel that the mines of the state of Ohio are on an equal with any state in the Union.

There was no change in the personnel of the department during the year. The records show that there are in the State of Ohio 1,006 mines; of this number 947 were in operation during the year. Of the latter 213 were visited once, 158 twice, 90 three times, 61 four times, 40 five times, 24 six times, 15 seven times, 8 eight times, 4 nine times, 4 ten times, 2 eleven times and 1 fourteen times. The mine that was visited fourteen times was the Phoenix No. 2, located in Athens county. This is the mine which on June 8, 1900, was visited by an explosion which three men lost their lives, and the mine property more or less destroyed. As a natural result this mine has been carefully looked at in order that no similar catastrophe may take place.

From an examination of the table it will be observed that in the number of inspections Perry county heads the list with a total of 244 visits, Athens 182, Stark 174, Belmont 122, Columbiana 114, and Jackson 60. Several of the above named counties representing the largest number of visits made are the home counties of the District Mine Inspectors, who no doubt take a local pride in their home counties as well as their being of easy access.

The second table is designed to show the total number of visits made in each district by each of the District Mine Inspectors. In the First District, in charge of R. M. Mason, 185 visits were made; Second District, in charge of D. H. Williams, 256; Third District, in charge of D. J. Wilson, 351; Fourth District, in charge of Thos. McGough, 191; Fifth District, in charge of W. H. Turner, 220; Sixth District, in charge of Jas. P. Davis, 223, and the Seventh District, under the supervision of W. H. Miller, 242 visits were made.

TABLE SHOWING THE NUMBER OF VISITS MADE IN EACH DISTRICT DURING THE YEAR.

Districts.	Number of mines visited once.	Number of mines visited twice.	Number of mines visited three times.	Number of mines visited four times.	Number of mines visited five times.	Number of mines visited six times.	Number of mines visited seven times.	Number of mines visited eight times.	Number of mines visited nine times.	Number of mines visited ten times.	Number of mines visited eleven times.	Number of mines visited fourteen times.	Totals.
per visits.	1	2	3	4	5	6	7	8	9	10	11	14	
district.	20	19	13	5	2	3	2	2	...	1	...	...	185
district.	17	34	5	6	5	4	4	...	1	1	2	1	256
district.	34	26	12	21	13	4	3	2	1	1	...	...	351
district.	20	14	12	9	6	3	1	2	...	...	...	...	191
district.	39	20	24	4	3	4	2	...	...	...	...	...	220
district.	38	26	14	7	2	1	3	1	2	...	...	...	223
district.	45	19	10	9	9	5	...	1	...	1	...	...	242
Totals.	213	158	90	61	40	24	15	8	4	4	2	1	1,668

SCALES TESTED DURING THE YEAR 1901.

During the year that has just closed numerous requests have been received by the Department requesting that mines be visited for the purpose of having scales tested.

One hundred and thirty-seven sets of scales were reported tested during the year 1901. This represents a gain of six when compared with the preceding year. These occurred in eighteen producing counties, and resulted in 114 sets being found correct, and three were found out of order. Crescent No. 3 mine located in Adams county, required the presence of an expert scale tester, as did also No. 3 mine, located in Perry county.

The greatest number of sets of scales were tested in Athens where thirty-two sets were tested, followed by Guernsey with Perry and Stark each fourteen, Columbiana twelve, Belmont and Morgan each eight, Carroll seven, Jackson and Tuscarawas each six, Adams, five, Medina and Meigs each two, Coshocton, Harrison, Lawrence, Mahoning and Summit each one set.

Eighty-three and one-fifth per cent. of the entire number of scales tested were found correct, and sixteen and four-fifths found out of order.

No requests were received to measure mine cars. During the ten years one thousand and fifteen sets of scales have been tested and this number seventy-six and one-sixth per cent. were found correct.

A detailed list of the number of sets of scales tested during the year 1901 is given, date on which tests were made, name of mine at which scales were tested, name of the inspector performing the test and the result obtained from same.

The second table following represents the number of sets of scales tested from the year 1887 to 1901, inclusive.

INSPECTOR OF MINES.

43

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1900.				
November 30	No. 16	Courtright Coal Co.	D. H. Williams	Found accurate.
December 6	Maple Hill	Maple Hill Coal Co.	"	"
December 14	Pekin	Hocking Valley Coal Co.	"	"
December 24	Kennard	Hippel Coal Co.	"	"
1901.				
January 7	No. 10	Sunday Creek Coal Co.	"	" (2 sets.)
January 31	Oakdale	North Star Coal Co.	"	"
February 2	Phoenix No. 2	Phoenix Coal Co.	"	" (2 sets.)
February 9	Rends No. 4	W. P. Rend & Co.	"	"
February 11	Rends No. 6	W. P. Rend & Co.	"	"
February 11	Phoenix No. 2	Phoenix Coal Co.	"	"
April 18	Rends No. 6	W. P. Rend & Co.	"	"
May 3	Black Diamond	Black Diamond Coal and Coke Co.	"	"
June 2	Maple Hill	Maple Hill Coal Co.	"	"
July 6	Oakdale	North Star Coal Co.	"	"
July 22	Rends No. 6	W. P. Rend & Co.	"	"
July 23	Rends No. 6	W. P. Rend & Co.	"	"
August 8	Somers Nos. 1 and 6	Somers Coal Co.	"	" (2 sets.)
August 16	Phoenix No. 2	Phoenix Coal Co.	"	Fond inaccurate (2 sets.)
October 21	Danville Nos. 1 and 2	C. & H. C. & I. Co.	"	Scales were repaired.
October 24	Juniper No. 4	Juniper & Barber	"	Accurate.
November 11	Luhrig No. 1	Luhrig Coal Co.	"	" (2 sets.)
				"
				"

SCALES TESTED — Continued.

BELMONT COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901.				
January 12	Laughlin	Laughlin Nail Co.	W. H. Turner	Found accurate.
April 15	Crescent	Lorain Coal & Dock Co.	"	Found inaccurate.
May 3	Crescent	Lorain Coal & Dock Co.	"	"
June 3	Crescent No. 3	Lorain Coal & Dock Co.	Thos. McGough	Found correct.
July 9	Gaylord	Gaylord Mining Co.	"	Found accurate.
July 24	Glen	Johnson Bros. Coal Co.	"	"
September 23	Crescent No. 3	Lorain Coal & Dock Co.	"	Out of order. The company sent for an expert scale tester.
October 11	Crescent No. 3	Lorain Coal & Dock Co.	"	"

CARROLL COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
		Railroad Co.	James P. Davis	Found inaccurate.
		" Co.	"	"

Date.	Name of mine.	Name of company.	By whom tested.	Results.
January 22	Lisbon	Lisbon Coal Co.	James P. Davis	Found incorrect.
February 14	Hayes	James Strabley	"	"
February 19	Hayes	James Strabley	"	"
March 14	Salem Shaft	Salem Coal Co.	"	Found correct.
March 26	Cedar Hill	Big Vein Coal Co.	"	Found incorrect.
April 3	Prospect Hill	Prospect Hill Coal Co.	"	Found correct.
April 5	State Line No. 3	State Line Coal Co.	"	Found incorrect.
April 17	New House	Herrriott Coal Co.	"	Found correct.
July 26	Cherry Valley	Cherry Valley Iron Works	"	Found correct.
September 17	Coleman Clay	Union Fire Clay Co.	"	Found incorrect.
September 22	Coleman Clay	Union Fire Clay Co.	"	Found incorrect.
October 15	Cedar Hill	Big Vein Coal Co.	"	Found correct.

COSHOCTON COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901. February 12	Bowers	H. D. Dennis	W. H. Turner	Found accurate.

SCALES TESTED — Continued.
GUERNSEY COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1900.				
November 30	Forsythe	Forsythe Coal Co.	W. H. Turner.	Found accurate. (2 sets.)
November 30	Cisco	Opperman Coal Co.	"	Found accurate. (2 sets.)
January 21	Hartford	Ellsworth Coal Co.	"	Found accurate. (2 sets.)
January 29	Central	Wills Creek Coal Co.	"	Found accurate. (2 sets.)
February 1	Imperial	Imperial Mining Co.	"	Found accurate. (2 sets.)
February 2	Central	Wills Creek Coal Co.	"	Found accurate. (2 sets.)
February 11	Cisco	Opperman Coal Co.	"	Found accurate. (2 sets.)
April 12	Imperial	Imperial Mining Co.	"	Found inaccurate.
May 6	Imperial	Imperial Mining Co.	"	Found accurate.
May 7	Black Top	Monarch Mining Co.	"	Found accurate.
August 1	Ideal	Wills Creek Coal Co.	"	Found inaccurate.
August 30	Trail Run	Ellsworth Coal Co.	"	Found accurate.
October 4	Hartford	Ellsworth Coal Co.	"	Found accurate.

HARRISON COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.

JACKSON COUNTY.				
Date.	Name of mine.	Name of company.	By whom tested.	Results.
1900.				
November 26	New Pittsburg No. 1.	New Pittsburg Coal Co.	R. M. Mason	Found accurate.
November 26	New Pittsburg No. 2.	New Pittsburg Coal Co.	"	"
December 13	Coalgate	Somers Coal Co.	"	"
December 29	Brenholts	Columbus Coal Co.	"	"
January 1901.				
January 25	Stalter No. 1.	R. Stalter Coal Co.	"	"
September 7	New Pittsburg No. 7.	New Pittsburg Coal Co.	"	"
October 7	Buckeye No. 2.	Buckeye Coal & Railway Co.	"	"
October 7	Buckeye No. 3.	Buckeye Coal & Railway Co.	"	"

JACKSON COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1900.				
November 23	Milton No. 2.	Milton Coal Co.	R. M. Mason	Found accurate.
November 23	Wellston No. 3.	Wellston Coal Co.	"	"
March 1901.				
March 7	Wainwright	Wainwright Coal Co.	"	"
May 1	Price	Gosline & Son.	"	"
October 10	Superior No. 2.	Superior Coal Co.	"	"
October 10	Superior No. 4.	Superior Coal Co.	"	"

SCALES TESTED—Continued.
JEFFERSON COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1900. November 20	McFayden	McFayden Coal Co.....	Thos. McGough	Found correct.
May 21	Bergholz	Kirk & Peterson.....	James P. Davis.....	"
August 14	McFayden	McFayden Coal Co.....	Thos. McGough	"
October 2	Rush Run	Pittsburg & Ohio River Coal Co..	James P. Davis.....	"
October 7	West Pittsburg	Eastern Ohio Coal Co.....	James P. Davis.....	"

LAWRENCE COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901. October 2	Hall	Hall Coal Co.....	D. H. Williams.....	Found correct.

MAHONING COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901. September 24	McKinley	C. C. Cook.....	James P. Davis.....	Found correct.

MEDINA COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901. April 2 April 4	Wagner	Excelsior Coal Co..... Card Coal Co.....	W. H. Miller..... "	Found correct. "

MEIGS COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901. April 8 May 15	Pittsburg	Pittsburg Coal Co..... Charter Oak Mining Co.....	D. H. Williams..... "	Found correct. "

TESTED
SCALES
PERRY COUNTY.

Results.

STARK COUNTY.

note:

Concluded.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901.				
March 13	Stark	Stark Coal Co.	W. H. Miller	Found correct.
April 30	Youngs Shaft	Pocock Coal Co.	"	"
July 5	Pigeon Run	Massillon Pigeon Coal Co.	"	"
July 18	Minglewood No. 2	Massillon Coal Mining Co.	"	"
July 22	Eureka	Massillon Cleveland Coal Co.	"	"
July 22	Stanwood	E. G. Krause	"	"
August 15	Elm Run	Elm Run Coal Co.	"	"
September 18	Elm Run No. 4	Massillon Coal Mining Co.	"	"
October 5	Warwick No. 5	Massillon Coal Mining Co.	"	"
October 11	Warwick No. 4	Massillon Coal Mining Co.	"	"
October 24	Central No. 7	Massillon Coal Mining Co.	"	"

SUMMIT COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
1901.				
May 15	Fox Lake	Massillon Coal Mining Co.	W. H. Miller	Found correct.

SCALES TESTED—Concluded.
TUSCARAWAS COUNTY.

Date.	Name of mine.	Name of company.	By whom tested.	Results.
November 16, 1900.	Indian Hill	Seneca Coal Co.	W. H. Turner.	Found incorrect.
February 5, 1901.	Wainwright No. 5.	Midvale Goshen Coal Co.	"	Found correct.
February 6	Wainwright No. 1.	Midvale Goshen Coal Co.	"	Found inaccurate.
April 18	Twin City	Dennison Coal Co.	"	Found ".
May 24	Indian Hill	Seneca Coal Co.	"	"
September 11	Somerdale No. 1.	Somerdale Coal Co.	"	"

TABLE SHOWING THE NUMBER OF SCALES TESTED, AND RESULT OF THE EXAMINATION FROM 1887 TO NOVEMBER 15, 1901.

Years.	Number sets of scales tested.	Number of sets found correct.	Number of sets found incorrect.	Remarks.
.....	74	41	14	
.....	55	33	14	
.....	48	46	20	
.....	59	37	25	
.....	61	62	24	8 in favor of company, 6 in favor of miners.
.....	86	81	39	12 in favor of company, 3 in favor of miners
.....	120	37	27	15 in favor of company, others not known
.....	64	65	31	15 in favor of company, 14 in favor of miners.
.....	96	65	28	5 against miner, 1 against operator.
.....	93	59	18	3 against miner, 3 against operator.
.....	77	82	17	4 against miner, 1 against operator.
.....	99	93	19	
.....	112	115	16	3 against miner, 1 against operator.
.....	131	115	24	
.....	139			
s.	1,240			

PERMANENT IMPROVEMENTS MADE DURING THE YEAR

In summing up the number of improvements which were made in the various mines of the state the total number is found to be 208. This is an increase of 38 over the number reported during the year 1900, when 170 improvements were made.

During the year 40 furnaces were built, 16 more than the number reported for 1900.

Forty-five fans were installed during the year, 18 in excess of the number placed in operation during the previous year. The tendency to increase the ventilating current and the volume of air passing in a mine is on the increase. In the earlier history of mines but little attention was given to the problem of mine ventilation. In some instances furnaces are used to move the volume of air, but are usually employed in mines of small capacity. Especially since large mines have been developed where there are miles of air courses, and particularly in coal mines generating fire damp or other noxious and explosive gases has come the demand for improved methods of ventilation.

The fan from its adaptability to all classes of mines has well established its superiority over all other methods of ventilation, and from the time when they were first used as a means of ventilation, when they were constructed from wood, they have now risen to a high plane of the mechanic's skill and workmanship. The time is probably not far distant when no other method of ventilation will be in use in the large mines of our State than that produced by the fan.

Sixty-six air shafts were sunk for the purpose of bettering the ventilation, three more than the number reported during 1900.

Thirty-one second openings were made, and five stairways erected as a ready and available means of ingress and egress to and from the mine in case of an accident. In many instances improvements were made to not only improve the ventilation of the mines but to reduce the peril to which miners are daily subjected to in the mining of coal.

Three ventilating baskets were hung in air shafts for the purpose of ventilating the mines, and eleven safety catches were applied to cages which were considered to be unsafe, and seven speaking tubes inserted.

The steady growth in the number of permanent improvements made in and about the mines of the state is highly gratifying to the Department. Operators have in every instance evinced a disposition to carry out all suggestions tending to place their mines in a safer and more improved condition to protect the lives of the men who delve in the earth for a livelihood, as well as to protect their own property.

These improvements took place in seven of the mining districts in which the state is divided, and are as follows: First District, under the supervision of R. M. Mason, twenty-three permanent improvements

made; in the Second District, in charge of D. H. Williams, thirty-three improvements were made; D. B. Wilson, in charge of the Third District, reports twenty-three permanent improvements as having been made; the Fourth District, which is overseen by Thomas McGough, reports improvements to the number of fifty-seven; the Fifth District, in charge of W. H. Turner, reports thirty-six; Jas. P. Davis, who has the supervision of the Sixth District, reports twenty-five, and eleven were made in the Seventh District in charge of W. H. Miller.

The second table exhibits the number of permanent improvements made under this Department from the year 1884 to 1901, inclusive.

TABLE SHOWING THE NUMBER AND CHARACTER OF THE
NENT IMPROVEMENTS MADE IN THE MINES OF THI
DURING THE INSPECTION YEAR.

Name of district inspector.	Furnaces.	Fans.	Air shafts.	Second openings.	Safety catches.	Stairways.	Speaking tubes.
R. M. Mason.....	2	10	5	5			1
D. H. Williams.....	8	9	12				2
D. B. Wilson.....	5	3	13	1			
Thos. McGough.....	10	10	15	17	1	4	
W. H. Turner.....	7	3	9	7	7	1	2
Jas. P. Davis.....	6	7	9	1	2		
W. H. Miller.....	2	3	3		1		2
Totals	40	45	66	31	11	5	7

TABLE SHOWING THE NUMBER AND CHARACTER OF PER
IMPROVEMENTS MADE IN THE MINES OF THE STAT
1884 TO 1901 INCLUSIVE.

Years.	Furnaces.	Fans.	Air shafts.	Second openings.	Safety catches.	Stairways.	Speaking tubes.
1884	43	10					
1885	45	19	45		13		
1886	13	6	22	10		12	
1887	39	9	50	7		8	
1888	43	4	52	17	13	12	
1889	42	13	57	21	7	3	3
1890	57	20	66	46	8	11	4
1891	53	17	55	26	19	19	5
1892	37	26	65	27	13	7	4
1893	77	35	131	67	16	19	5
1894	55	18	106	60	7	11	3
1895	66	17	105	60	9	11	3
1896	56	21	93	81	5	7	3
1897	40	22	75	41	4	7	3
1898	44	17	73	45	7	11	1
1899	36	25	60	45	11	13	7
1900	24	27	69	31	1	9	1
1901	40	45	66	31	11	5	7
Totals	810	351	1,190	618	144	165	49

MINES WHICH GENERATE LIGHT CARBURETTED HYDROGEN GAS.

(FIRE DAMP.)

Sixty-one mines distributed over twelve of the thirty counties producing coal generate this dangerous element, known as Fire Damp. In Athens County the following mines have been added to the list of mines generating fire damp in addition to those reported in the year 1900. Aubrig No. 1, No. 2, and McLeish; in Belmont County Wegee is added to the list; in Columbiana Leetonia mine has been added to the list of mines which generate fire damp; Jefferson County Brilliant, Rolling Mill No. 2, LaBelle and West Pittsburg; Perry County, Rends No. 3, and Chestnut Hill No. 2; in Portage County, Hutson No. 4, and in Stark County, West Brookfield No. 6, Oakwood No. 16, Pocock No. 2, Geise No. 13, and Warwick No. 5 and Woodland.

In Columbiana County Letonia mine was added to last year's mines reporting the presence of fire damp, and the counties of Guernsey, Mahoning, Meigs and Noble remain the same.

The total number of accidents which were attributable to the disastrous effects of fire damp was six during the year 1901, three of which proved fatal, one was of a serious nature, and two were of a minor character. The three resulting fatally occurred at the LaBelle mine located in Jefferson County, on November 11th., at which time Wm. Vandine, James Robinson and Edward Simpson were killed by an explosion of gas. Wm. Vandine, one of the deceased, was employed as mine foreman at the LaBelle Shaft, which had been abandoned for nearly twenty years, and in the meantime had filled up with water and debris to the top of the mine. About a year ago the company owning this mine with W. H. Ewing as superintendent proceeded to pump out the water and clean out, and timber the shaft, which is said to be one hundred and eighty-five feet deep, for the purpose of working a large body of coal in West Virginia. On the morning of November 11th, 1901, the water had been pumped out to a depth of one hundred and eighty feet from the surface. The work was being executed by the aid of electric lights, no others being allowed in the shaft. Mr. Vandine and the two other men were working at the top with a view of lowering it farther down the shaft when an explosion occurred, killing all three men instantly. The fan in operation at this time was capable of making seventy-five thousand cubic feet of air per minute, and was in use at the time of the explosion.

The theory advanced as to the cause of the accident was that there had been a short circuit on the electric wires causing a spark or flash, which had ignited a small pocket of gas, filling the shaft with flames which were intensified by the fan being in operation. The verdict of the Coroner returning the inquest over the bodies of the men who met their death in the LaBelle Shaft mine on November 11th, 1901, is as follows:

After having examined the bodies of the deceased Edward Sim, James Robertson and Wm. Vandine, and from the testimony add in this inquest, I do find that they came to their death on the morning November 11th, A. D., 1901, while at work in the LaBelle No. 1 S owned by the LaBelle Iron Works, located in the Sixth Ward, Steville, Jefferson County, Ohio, their death being caused by an explosion of gas, commonly called fire damp, which was in some unknown manner ignited at the bottom of the pit. The testimony shows that the men lost their lives had no lights of any kind with them, and that they were with electric lights which were suspended down the back shaft.

In the absence of any other known manner in which the gas have been ignited, it is probable that it was ignited by the electric lights which were charged with electricity at the time. The testimony shows that reasonable precaution was taken by the Company to insure safety of the men working in and about the pit, and that every suggestion offered by the State Mining Department had been followed, the fan used being one that was recommended by a representative of the Mining Department, and the testimony shows that the amount of air forced down the air shaft to the bottom of the pit was so great as to be an actual hardship to the men while working down in there, by reason of the cold draft of air; which current of air should certainly have been sufficient to dispel any ordinary amount of gas that could come through the rock or mud from the old entries.

Witness my hand and seal of this office this 28th day of November, A. D., 1901.

GEORGE C. CAMPBELL,

Coroner of Jefferson County, Ohio

WHICH GENERATE LIGHT CARBURETTED HYDROGEN GAS.
(FIRE DAMP.)

	ATHENS COUNTY.	
.....	Luhrig No. 1.....	No. 10.
.....	Luhrig No. 2.....	No. 16.
No. 2.....	Rends No. 4.....	No. 24.
.....	Rends No. 6.....	McLeish.
7.....	.....
	BELMONT COUNTY.	
.....	Wegee	Schnegg.
	COLUMBIANA COUNTY.	
it	Lisbon	Leetonia.
l	Cherry Valley No. 3.....	Pine Hill.
		Salem.
	GUERNSEY COUNTY.	
.....	Walhounding	Hartford.
.....	Imperial	Old Orchard.
.....	Little Kate	Central.
.....	Kings	Black Top.
	JACKSON COUNTY.	
it	Superior No. 6.....	Fluhart No. 3.
	JEFFERSON COUNTY.	
.....	La Belle	High Shaft.
ill No. 2.....	West Pittsburg	
	MAHONING COUNTY.	
r Shaft .....	.....
	MEIGS COUNTY.	
.....	
	NOBLE COUNTY.	
.....	
	PERRY COUNTY.	
3.....	Chestnut Hill No. 2.....	
	PORTAGE COUNTY.	
4.....	.....
	STARK COUNTY.	
No. 1.....	Warwick No. 4.....	Pocock No. 2.
No. 2.....	Warwick No. 5.....	Geise No. 13.
ille No. 3.....	Oakwood No. 16.....	Woodland.
field No. 6.....	Youngs Shaft	

CHARACTER OF DEVELOPMENT AND MODE OF VENTILATION IN USE IN THE MINES OF THE STATE.

The character of development and mode of ventilation employed the various mines of the State during the year will be found in the accompanying table, which has been designed to exhibit the kind of open employed to remove the coal from the mines, and also to show the method employed to produce ventilation, and the number of mines in which they are in use. The number of mines of which we were unable to secure mode of ventilation is also given.

At the close of the inspection year there were nine hundred and forty-seven mines in operation in the State. The mode of development with the exception of ninety-nine has been given. The number of mines failing to report the mode of development are as a rule small and employ drift as a means of development.

The returns received for the year show that six hundred and twenty-five mines employ the drift as a means of reaching the coal. This number is a slight decrease in the number of mines using this means as a mode of development as compared with the year 1900. Perry County leads the number of drifts, employing sixty-seven; followed by Muskingum with sixty-three, Tuscarawas, sixty, and Belmont County forty-nine.

The number of mines using shafts for removing the coal is one hundred and thirty-three. This is an increase of twelve over that of preceding year. The greatest number of shafts in use occur in Scioto County, which made a return of thirty-two; Jackson ranks second with twenty-five, followed by Athens, Guernsey, and Mahoning, each having twelve in use.

There are one hundred and forty-nine slopes in use as compared with one hundred and forty reported in the year 1900, and one hundred and thirty-three in the year 1899. The greatest number are found in Columbiana County, where seventeen are in use, followed by Athens and Mahoning each with fifteen, and Muskingum thirteen.

Increases are notable in the number of mines employing shafts and slopes as a method of development, while those using the drift have fallen behind. This is probably due to the fact that small mines of little consequence have not been given the attention that the larger mines receive and as a rule employ the drift as a mode of development.

From the second table which exhibits the mode of ventilation in use in the various mines, it will be observed that fans are used in one hundred and eighty-two mines. These are distributed in nineteen counties. The greatest number appear in Jackson County, Stark, Guernsey and Jefferson. The number of furnaces in use in the mines for ventilating purposes is two hundred and fifty-three. This number shows a decrease of eleven as compared with the previous year. This fact bears proof that the furnace is being superseded by the fan as a means of ventilation. Tuscarawas

County leads in the number of furnaces in use, reporting forty; Belmont, thirty; Perry, twenty-six, and Coshocton seventeen. Fire baskets are used in forty mines.

Steam jets and exhaust steam furnish ventilation in forty-four mines, an increase of eleven over that of the year 1900. These occur in the counties of Stark, where sixteen are in use; Medina nine, and Mahoning, Summit and Wayne each report three.

Three hundred and eighty-nine mines depend upon natural ventilation.

These mines are invariably of minor consequence, employing anywhere from one to five men, and usually only work during the winter months in mining coal for domestic purposes.

The ventilation of ninety-eight mines is unknown, but the supposition is that natural means are in use.

The second table represents the mode of development and means of ventilation in use in the mines from the year 1892 to 1901 inclusive.

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE
 VARIOUS METHODS OF VENTILATION AND THE THREE KINDS OF
 OPENINGS.

Counties.	Character of opening.					Mode of ventilation.					
	Drift.	Shaft.	Slope.	Small mines, kind of opening unknown.	Totals.	Fan.	Furnace.	Fire basket.	Steam jet and exhaust from pump.	Natural.	Small mines, method.
Athens	19	12	15	6	52	27	3	5	1	11	
Belmont	49	2	11	5	67	13	30	3	1	17	
Carroll	17	2	4	1	24	3	10	1	1	7	
Columbiana	27	5	17	6	55	12	13	.....	2	21	
Coshocton	24	.....	.....	.....	24	.....	17	.....	.....	.....
Gallia	3	.....	.....	3	6	.....	2	.....	.....	1	
Guernsey	15	12	6	2	35	14	3	1	2	13	
Harrison	31	1	5	6	43	1	4	4	.....	29	
Holmes	9	.....	2	.....	11	.....	1	.....	.....	10	
Hocking	16	.....	.....	2	18	12	2	1	.....	1	
Jackson	28	25	9	8	70	32	16	1	.....	12	
Jefferson	33	4	4	3	44	14	12	2	1	12	
Lawrence	19	.....	.....	3	22	.....	9	.....	.....	10	
Mahoning	6	12	15	1	34	5	10	.....	3	15	
Medina	11	1	1	.....	13	.....	2	2	9	.....
Meigs	28	2	2	2	34	5	7	.....	.....	19	
Morgan	2	.....	.....	.....	2	.....	2	.....	.....	.....
Monroe	1	1	.....	1	6	1	.....	.....	.....	4	
Muskingum	63	.....	13	22	98	.....	16	7	.....	53	
Noble	42	1	3	6	52	1	3	1	.....	41	
Perry	67	7	8	5	87	13	26	5	.....	35	
Portage .....	.....	5	.....	.....	5	4	.....	.....	.....	1	
Scioto	5	.....	.....	1	6	.....	.....	.....	.....	5	
Stark	31	32	11	6	80	15	16	2	16	26	
Summit	4	1	4	.....	12	2	2	.....	3	5	
Trumbull	1	1	6	1	9	1	1	.....	1	4	
Tuscarawas	60	.....	8	8	76	6	40	3	.....	22	
Vinton	7	2	2	1	12	2	4	.....	.....	6	
Washington .....	.....	.....	2	.....	2	.....	2	.....	.....	.....
Wayne	4	2	1	.....	7	.....	2	.....	3	2	
Totals	625	133	149	99	1,006	183	255	38	43	389	

SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION AND THE THREE KINDS OF WINGS FROM 1892 TO 1901 INCLUSIVE.

Years.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
.....	303	676	657	749	821	800	921	789	696	625
.....	91	121	149	150	149	153	143	145	122	133
.....	40	61	61	68	66	85	145	133	140	149
ies. kind of										
unknown.....	458	151	296	220	167	190	46	65	114	99
.....	892	1009	1163	1187	1203	1228	1255	1132	1072	1006
.....	127	141	139	134	134	149	149	147	171	182
.....	253	323	264	278	281	280	317	274	264	253
s	11	23	32	36	38	51	45	41	48	40
and exhaust										
np>	30	39	43	48	52	49	47	34	33	44
es. mode of	205	316	378	452	528	516	636	523	453	389
n not known.	266	167	309	242	179	200	73	107	103	98
.....	892	1009	1165	1190	1212	1245	1267	1126	1072	1006

POWDER CONSUMED IN THE MINING OF COAL.

Efforts made to obtain the amount of powder consumed in the Mines of the State resulted in five hundred and two firms reporting, as compared with 434 making returns of the amount of powder consumed during the year 1900.

It is an impossibility to ascertain the exact amount of powder consumed in the mines in producing coal. Firms in some instances fail to keep any record of the amount of powder sold or even the amount purchased by them. As the miners purchase their own explosives it is even yet more difficult to come to any definite result as to the amount of powder that is consumed in the mining of coal.

The accompanying table, however, will give a fair estimate as to the amount of coal which was produced to the keg of powder used. These returns given represent the larger portion of the mines of the State. Of the eight hundred and nine firms or persons in the State five hundred and two made returns as to the amount of powder consumed in the mining of coal, compared with four hundred and thirty-four making returns in the year 1900, or a gain of sixty-eight. Three hundred and seven firms during the year 1901 failed to make any returns whatever as to the amount of powder which was consumed in their mines in the mining of coal by this method.

The number of tons of coal produced by the use of powder from firms sending in returns during the year that has just passed was fourteen million, six hundred and seventy-four thousand, four hundred and twenty-seven, a loss of one million, one hundred and ninety-eight thousand, nine hundred and thirty-eight when compared with the amount so produced during the preceding year.

The amount of powder consumed in producing this amount of coal was two hundred and forty-nine thousand, eight hundred and sixty-one kegs, or a loss of twelve thousand, two hundred and ninety-two kegs as compared with the year 1900. This amount represents 72 per cent of the entire production of coal for the year. The number of tons of coal mined to the keg of powder was fifty-nine.

The following counties produced the greatest amount of coal by the use of powder: Jackson, Athens, Guernsey, Perry, Tuscarawas, Jefferson and Stark, each producing over one million tons of coal in this way. The counties returning the smallest amount produced by the use of powder were Monroe, Washington and Holmes.

The excessive quantities of smoke created by the discharge of powder in displacing the coal has been the ground for numerous complaints received during the year, but owing to the varying conditions existing so many of the mines of the State it is very difficult to establish any that would prove satisfactory to all of them. However, wherever practicable, set hours for firing shots have been put in practice.

SHOWING THE AMOUNT OF POWDER CONSUMED IN THE
ES OF THE STATE AND THE NUMBER OF TONS OF COAL
DUCED TO THE KEG.

Counties.	Number firms which reported.	Number firms which did not report.	Tons mined by firms which reported.	Number kegs reported as used.	Number tons mined to kegs of powder used.
.....	27	11	2,027,643	17,584	115
.....	29	26	688,083	5,310	129
.....	15	6	237,098	7,918	29
.....	30	15	753,903	10,069	75
.....	9	9	341,377	5,160	66
.....	2	.....	15,740	128	121
.....	18	10	1,500,583	9,593	157
.....	11	30	50,893	466	109
.....	8	3	2,281	58	39
.....	5	4	830,037	8,585	96
.....	43	6	2,095,883	75,617	28
.....	17	16	1,229,344	8,616	142
.....	15	4	106,939	3,575	27
.....	12	21	104,895	1,008	104
.....	9	1	179,231	5,995	36
.....	24	4	230,383	3,594	64
.....	2	.....	33,504	520	64
.....	2	3	308	11	28
.....	26	51	90,031	1,760	51
.....	30	18	65,116	713	91
.....	45	24	1,465,170	19,888	74
.....	2	1	84,581	2,682	31
.....	4	1	9,799	508	19
.....	37	21	1,007,203	29,558	34
.....	12	.....	123,541	4,013	30
.....	3	5	10,068	245	41
.....	52	10	1,296,763	23,691	55
.....	6	6	51,887	1,457	35
.....	2	.....	1,738	69	25
.....	5	1	31,405	1,470	21
.....	502	307	14,674,427	249,861	584

DETAILED MINING SCALE FOR HOCKING VALLEY,

the Basing District of Ohio, effective during the Scale Year, from April 1, 1900 April 1, 1901, as adjusted and fixed by and between the Ohio State Officials U. W. of A. and the Operators of the said District by their duly authorized representatives, at Columbus, Ohio, on Tuesday, February 20th, 1900,

And Renewed and Continued March 6, 1901, to be Effective From April 1, to April 1, 1902.

PICK MINING RATE per ton of Screened Lump Coal.....	\$
Run of Mine, $\frac{5}{8}$ lump price.....	
ENTRIES — Dry entries, per yard.....	
Break-throughs in entries.....	
Break-throughs in rooms.....	
Room Turning	
Timber Men, per day.....	
Track Layers, per day.....	
Track Layers' Helpers, per day.....	
Pipe Men, per day.....	
Trappers, per day.....	
Cagers, Drivers, Machine Haulers, Water Haulers and all other inside day labor, per day.....	
Dumpers and Trimmers, per day.....	
Couplers, Greasers, Slack Haulers, Firemen, Engi- neers, Carpenters, Blacksmiths, Cleaners, Hoistlers, and other outside day labor. }	Special prices according to nature of work.

MACHINE.

Cutting; by Jeffrey styles of machine, in ROOMS, per ton.....	\$
“ “ “ in ENTRIES	
“ by punching machine, in ROOMS.....	
“ “ “ in ENTRIES	
Loading: in ROOMS, per ton.....	
“ “ with hand drilling, per ton.....	
“ in ENTRIES	
“ “ with hand drilling.....	
Loading, Break-throughs in entries.....	Entry Price
“ “ in rooms	
“ “ with hand drilling.....	
Drilling by hand.....	
“ machine	
Room Turning, Cutter and Loader.....	Entry Price

RULES AND CONDITIONS GOVERNING MINING IN HOCK- ING DISTRICT FROM APRIL 1, 1901, TO APRIL 1, 1902.

——— TURNS.

There shall be no free turns allowed to either rooms or entries. The entries shall be driven as fast as operators desire or conditions permit; but in no case shall entry miners be allowed more cars per week than room miners, and at least once each week the turn shall be made uniform throughout the mine for the one previously worked. If, however, the regular turn will not allow cars enough to drive the entries as fast as desired, the operators shall increase the number of miners in each entry, so that, by giving to each the regular turn, the entries shall be driven as fast as two miners could do with full work.

If, however, the room men decline to take their places in the entries when requested to do so by the operator, then the entry men shall have free turns until the entries are driven their required length.

LIMIT ON MINE CARS.

No limit of weight shall be placed on loading mine cars; and in case of loss in transit the Company shall not be held responsible, except, where cars are broken by employes or where a wreck occurs, the average weight shall be made good by the Company.

In order that miners cannot take advantage of this clause, the mine manager or committee, of any mine where complaint is made of loading cars over their capacity, shall mutually agree on a standard height of loading mine cars.

CHECK OFF.

The system of checking off for the United Mine Workers' Organization remains in force and must be observed. Same to be checked off by per cent. of loadings.

CLAY VEINS.

Where clay veins, rolls in bottom or horse-backs exist, the price for removing same shall be determined between Loader, Mine Boss and Mine Committee.

BOTTOM SPRAGS ETC.

All machines shall be fitted with front shoe not to exceed two and one-half inches in thickness, and the machine men be required to cut coal level and close to the front; and in no case shall thickness to bottom exceed four inches, except in case of pots or other extreme variation; and all machine men leaving more bottom above must lift the same, or it shall be lifted at their expense.

Where the Mine Boss or Superintendent orders left greater thickness than four inches, the Company shall take care of it, and where the bottom left is uneven and unmarketable the miner may call the attention of the Mine Boss to the same and endeavor to arrive at an agreement for its removal or retention. If the Mine Boss and miner fail to reach an agreement as to compensation or otherwise, the matter shall be submitted to the Superintendent and Mine Committee for settlement.

In case of sprags being left by a machine man, he shall be notified by loader, and if he refuse to remove the same, the loader shall remove the same and be allowed fifty cents for so doing. The said fifty cents to be deducted from the machine man's pay. And where any machine runner leaves six or more sprags in any one day,

he shall be removed from machine and his services disposed of as deemed by the General Superintendent.

ROOMS.

All rooms shall be thirty feet wide with two tracks in each room, where practicable. Where rooms have to be cut twenty-four feet wide or under to eighteen feet, same shall be paid three cents per ton extra. Not to affect pillars or entries. Each two men shall be given two rooms where practicable.

BLACKSMITHING.

Machine loaders are not to be charged for blacksmithing.

PICK MINE NECKS.

In opening rooms in pick mines, where narrow work exceeds eighteen feet before widening room, all in excess of eighteen feet shall be paid for at entry price.

WET PLACES.

Where the Mine Boss and miner fail to agree as to whether the working place is wet and entitled to extra pay, it shall be referred to the Committee and Mine Boss or Superintendent, and, if adjudged wet, three cents per ton additional shall be paid.

MINE IDLE ON ACCOUNT OF IDLE MEN.

Where there are four men out of cutting or drilling, working after same machine or drill when work is commenced in the morning, and the same is not caused by accident, the mine shall remain idle that day.

But in no case shall the mine be stopped before the matter is brought to the attention of Mine Boss and Mine Committee, and only on their order.

SLATE.

The Company shall remove the slate from the working places of the mine; and if the Company fail after being notified, the miner shall be employed to remove such slate and be paid therefor at the price agreed upon between the Mine Boss and the miner, based on the price of inside day labor.

DOUBLE SHIFT ENTRY.

Twenty-five cents per yard shall be paid for driving double shift entries and break-throughs between entries.

STOPS.

No stoppage shall take place at any mine on account of any grievance until the matter has been presented to the Mine Boss and Superintendent, and an opportunity for adjustment permitted and, failing to adjust, then the matter be referred to the officials and operators.

CLEAN COAL.

(Adopted at a joint meeting held at Athens, Ohio, April 17, 1901.)

No dock shall be taken for less than 100 pounds of dirt, unless it is apparent that dirty coal has been loaded intentionally; then 300 pounds of good coal shall be taken for 100 pounds or less.

For from 150 to 250 pounds of dirty coal, 700 pounds of good coal shall be taken.

For 250 or more pounds of dirty coal, 1,000 pounds of good coal shall be taken.

For the third dirty car of coal in the same day from the same working place, 1500 pounds of good coal shall be taken; and if the man or men are found to have an average place by Bank Boss and Committee, he, or they, shall be laid off for one day or more, at the discretion of Mine Boss and Committee.

All good coal to be placed in the Burial Fund.

Weigh offices to be so arranged that check-weighman can see chutes and railroad car.

Resolved, as authorized at Joint Meeting held at Athens, Ohio, April 17, 1901.

For Operators:

EDWARD JOHNSON,
Z. WILLIAMS,
J. M. ROAN.

For Miners:

W. H. HASKINS, President,
MICHAEL COLLINS, District President,
JOSEPH RICHARDS, District Secretary.

Attest:

F. S. BROOKS, Secretary.

ANNUAL REPORT

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT.

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>Chief Inspectors.</i>						
Andrew Roy	Trumbull ..	Wm. Allen, D.	April 6, 1874	April 6, 1878	4 years	Resigned.
Jas. D. Poston, D.	Hocking ..	R. M. Bishop, D.	April 6, 1878	Nov. 15, 1879	1 yr., 7 mos.	Not confirm. by Senate.
David Owens, D.	Trumbull ..	"	Nov. 16, 1879	Feb. 12, 1880	3 months ..	
Andrew Roy, R.	Jackson ..	Chas. Foster, R.	Feb. 12, 1880	Feb. 16, 1884	4 years	Resigned.
Thos. B. Bancroft, D.	Gallia	Geo. Hoadley, D.	Feb. 16, 1884	April 1, 1888	4 yrs., 1½ mo.	
Robt. M. Haseltine, R.	Mahoning ..	Joseph B. Foraker, R.	April 1, 1888	Apr. 30, 1888	1 month	Reappointed.
"	"	"	May 1, 1888	Apr. 30, 1892	4 years	Reappointed.
"	"	Wm. McKinley, Jr. R.	May 1, 1892	Apr. 30, 1896	4 years	Incumbent.
"	"	Asa S. Bushnell, R.	May 1, 1896	Apr. 30, 1900	4 years	
Elmer G. Biddison, R.	Athens	Geo. K. Nash, R.	May 1, 1900	Apr. 30, 1904	.....
<i>District Inspectors.</i>						
Jacob J. Klein, R.	Stark	Chas. Foster, R.	June 4, 1881	Jan. 26, 1883	2 yrs., 7½ mos.	Resigned.
John P. Williams, R.	Trumbull ..	"	Jan. 26, 1883	Feb. 16, 1884	1 yr., 21 dys.	Resigned.
Austin P. King, Jr. D.	Columbiana ..	Geo. Hoadley, D.	Feb. 16, 1884	Apr. 30, 1886	2 yrs., 2½ mo.	Resigned, held over as no appointment was made at expiration of term, May 1, 1887.
Wm. Dalrymple, D.	Athens	"	May 1, 1884	Mar. 1, 1888	3 yrs., 10 mo.	
Wm. A. Davis, D.	Guernsey ..	Geo. Hoadley, D.	May 1, 1884	Feb. 15, 1886	1 yr., 9½ mos.	Resigned.
Joseph L. Morris, R.	Coshocton ..	Joseph B. Foraker, R.	Feb. 15, 1886	June 1, 1889	3 yrs., 2½ mo.	Resigned.
"	Jackson ..	"	April 1, 1888	Apr. 30, 1888	1 month	Reappointed.
"	"	"	May 1, 1888	Apr. 30, 1891	3 years	
"	"	"	May 1, 1888	Apr. 30, 1891	3 years	
"	"	"	May 1, 1888	Apr. 30, 1891	3 years	

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>District Inspectors—Continued.</i>						
Thos. H. Love, R.....	Carroll	Joseph B. Foraker, R.....	June 1, 1889	Aug. 1, 1891	2 yrs., 2 mos.	Reappointed.
"	"	Wm. McKinley, Jr. R.....	July 15, 1892	Apr. 30, 1894	1 y. 9 m. 15 d.	Reappointed.
Wm. B. Rennie, D.....	Tuscarawas	"	May 1, 1894	Feb. 15, 1898	3 yrs., 9 $\frac{1}{2}$ mo.	Resigned.
Jno. E. Short, D.....	Hocking	Jas. E. Campbell, D.....	Aug. 1, 1891	July 15, 1892	11 mo., 15 d.	Resigned.
Adam P. McDonald, D.....	Perry	"	May 1, 1891	May 7, 1894	3 yrs., 7 d.	Resigned.
Wm. H. Turner, D.....	Guernsey	"	May 1, 1891	July 15, 1892	1 yr., 2 $\frac{1}{2}$ mos.	To take effect July 15,
Jas. W. Haughee, R.....	Athens	Wm. McKinley, R.....	May 1, 1891	Apr. 30, 1894	3 years	before entering on
			June 17, 1892	June 28, 1892	Apptd, resg'd	his duties.
Robt. H. Miller, R.....	Perry	Wm. McKinley, R.....	July 15, 1892	Apr. 30, 1894	1 yr., 9 $\frac{1}{2}$ mos.	Reappointed.
Alexander Beattie, R.....	"	"	May 1, 1894	July 13, 1898	4 yrs., 2 $\frac{1}{2}$ mo.	Reappointed.
"	Athens	"	July 15, 1892	July 15, 1895	3 years	Reappointed.
Jno. P. Jones, R.....	"	"	July 15, 1895	July 15, 1898	3 years	Reappointed.
Saml. Llewellyn, R.....	Stark	"	July 15, 1892	July 15, 1895	3 yrs., 5 $\frac{1}{2}$ mo.	Resigned.
"	Jackson	"	July 15, 1895	Dec. 31, 1897	2 yrs., 5 $\frac{1}{2}$ mo.	Reappointed.
Thos. McGough	Belmont	Asa S. Bushnell, R.....	May 9, 1894	May 21, 1897	3 yrs., 12 da.	Reappointed.
"	"	Wm. McKinley	May 21, 1897	May 19, 1900	2 y. 11 m. 28 d	Reappointed.
Rees T. Davis.....	Columbiana	Wm. McKinley	May 1, 1894	Apr. 30, 1897	3 years	Reappointed.
Wm. K. Moore.....	Stark	Asa S. Bushnell	May 1, 1897	June 1, 1900	3 yrs., 1 mo.	Reappointed.
Jas. P. Davis.....	Carroll	Geo. K. Nash.....	June 1, 1900	Apr. 30, 1903	2 y. 10 m. 29 d	Incumbent.
Lucius W. Hull.....	Athens	Wm. McKinley	May 1, 1894	Apr. 30, 1897	3 years	Reappointed.
David B. Wilson.....	Perry	Asa S. Bushnell	May 1, 1897	Apr. 30, 1900	3 years	Reappointed.
"	"	"	Jan. 17, 1898	July 15, 1898	6 months	Resigned.
"	"	"	July 15, 1898	May 30, 1900	1 y. 10 m. 15 d	Reappointed.
"	"	"	Feb. 15, 1898	Apr. 30, 1900	2 y. 10 m. 15 d	Incumbent.
"	"	"	Jan. 1, 1901	Apr. 30, 1903	2 yrs. 4 mo.	Resigned.
"	"	"	July 15, 1898	July 15, 1899	1 year	Reappointed.
"	"	Geo. K. Nash.....	July 15, 1898	June 1, 1900	1 y. 10 m. 15 d	Reappointed.
"	"	"	June 1, 1900	Apr. 30, 1903	2 y. 10 m. 29 d	Incumbent.

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT. — Concluded.

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>District Inspectors—</i>						
Concluded.						
David H. Williams.....	Athens	Asa S. Bushnell.....	July 15, 1899	July 15, 1901	2 years	Reappointed.
"	"	Geo. K. Nash.....	July 15, 1901	July 15, 1904	3 years	Incumbent.
R. M. Mason.....	Hocking	Geo. K. Nash.....	May 21, 1900	Apr. 30, 1903	2 y. 11 m. 9 d.	Incumbent.
Wm. H. Turner.....	Guernsey	"	June 1, 1900	Apr. 30, 1903	2 y. 10 m. 29 d.	Incumbent.
Wm. H. Miller.....	Stark	"	June 1, 1900	July 15, 1901	1 yr., 14 dys.	Reappointed.
"	"	"	July 15, 1901	July 15, 1904	3 years.	Incumbent.

MINE MAPS.

The mapping of mines is a subject to which special attention has been rected during the past two years. The importance of having on file aps of mines that are either in operation or those that have ceased to erate or have been worked out and abandoned cannot be overestimated. most daily requests are being made to this Department either personally by letter for information regarding different maps of mines that have en placed on file.

During the earlier history of the Department the law was not rigidly forced regarding this important feature relating to the mapping of nes. Hence, many mines were abandoned without anything to show the ount of underground workings or to what extent the mining operations ended.

Our experience has been that operators seem willing to do their part having their mines surveyed and mapped when the excavation exceeds een thousand cubic yards or to have extensions made annually to maps t are already on file in this office, but the main difficulty seems to be ir inability to secure competent mining engineers to correctly survey l map their mines. In cases of this kind an extension of time has been nted.

The efforts of the Department in carrying out the intent of the law his respect resulted in a larger number of maps being filed during the r 1901 than was ever filed in any previous year or during the history he Department. Two hundred and fifty-seven maps were placed on during the past year, which was eighty more than was filed during 3, and one hundred and five more than were filed during the year 1899.

At the close of the year 1901 the total number of maps on file in this artment was 1167.

The following table represents the number of maps on file prior to years 1884, 1888 and 1897, and the number filed during each succeed-year.

A detailed list of the maps placed on file during the year 1901, and names of the mines by counties is hereby given.

DETAILED LIST OF MAPS FILED DURING THE YEAR 1
BY COUNTIES.

ATHENS COUNTY.		
No. 25 or Half Moon.....	.....	Sedalia.
No. 59 .....	.....	Jumbo.
No. 21 .....	.....	Minker Run.
No. 53 .....	.....	Daleton No. 1.
No. 61 .....	.....	Elm Rock.
No. 57 .....	.....	Wells.
Carbondale .....	.....	Nelsonville Clay.
Phoenix No. 2.....	.....	Chauncey.
Rends No. 4.....	.....	New Pittsburg No.
No. 16 .....	.....	New Pittsburg No.
Maple Hill .....	.....	Somers No. 1.
No. 24 .....	.....	Doanville.
Federal Valley No. 1.....	.....	Daleton No. 2.
No. 3 .....	.....
BELMONT COUNTY.		
Nail Mill .....	.....
Wheeling Creek No. 1.....	.....	Maple Hill.
Walnut Hill No. 2.....	.....	Rock Hill.
Quaker City .....	.....	Black Diamond.
Empire No. 1.....	.....	Captina.
Empire No. 2.....	.....
Empire No. 3.....	.....	Gaylord.
O. & W. Va.....	Glen	Kennon No. 2.
CARROLL COUNTY.		
Magnolia .....	.....	Davis No. 6.
COLUMBIANA COUNTY.		
Slope .....	.....	Wheat Hill.
Hayes .....	.....	Quaker Valley.
Cedar Hill .....	.....	Cement.
New Shaft .....	.....	Pine Hill.
Pleasant Valley No. 6.....	.....	Fairfield No. 2.
Pleasant Valley No. 7.....	.....	State Line Slope.
Card & Prosser No. 4.....	.....	Dewey No. 2.
Pro-pect Hill No. 2.....	.....	Leetonia.
COSHOCTON COUNTY.		
Hay No. 2.....	.....	Cassingham.
Franklin No. 1.....	.....	Flint Hill.
Morgan Run No. 3.....	.....	Dan Hudson.
.....	.....	Conesville.
GUERNSEY COUNTY.		
Central .....	.....	Little Kate.
Walhounding .....	.....	Old Orchard.
Trail Run .....	.....	Black Top.
Hartford .....	.....	Indian Camp.
Forsythe .....	.....	Ideal.
Kings .....	.....	Imperial.

LED LIST OF MAPS FILED DURING THE YEAR, Etc. — Continued.

HOCKING COUNTY.		
sburg No. 1.....	.....	No. 29.
sburg No. 2.....	.....	Coalgate.
sburg No. 3.....	.....	No. 15.
sburg No. 6.....	.....	Snake Hollow.
o. 1.....	.....	Lost Run.
o. 2.....	.....
o. 3.....	.....
JACKSON COUNTY.		
No. 1.....	Milton No. 1.....	Chapman.
No. 2.....	Milton No. 2.....	Grace.
No. 3.....	Wainwright.....	Springfield.
No. 4.....	Buckeye.....	Fluhart No. 1.
No. 5.....	Alma.....	Fluhart No. 2.
No. 6.....	Eclipse.....	Fluhart No. 3.
No. 7.....	Comet.....	Wellston No. 3.
	Standard.....	Acorn Slope.
organ No. 3.....	Emma No. 3.....	Tom Corwin No. 1.
	Emma, New.....	Machine Coal Co.
3.....	Star No. 4.....	Milton No. 3.
	Milton No. 4.....	Crescent.
JEFFERSON COUNTY.		
2.....	.....	Long Run No. 1.
.....	.....	Kelley No. 2.
.....	.....	Calumet Clay.
tern Coal.....	.....	Conner No. 1.
No. 1.....	.....	Conner No. 2.
No. 2.....	.....	Ohio Valley Clay.
Clay.....	.....
LAWRENCE COUNTY.		
e Ore.....	.....	New Castle.
MAHONING COUNTY.		
.....	.....	Greenamyier Shaft.
.....	.....	Stouffer.
MEDINA COUNTY.		
.....	.....	Easter.
MEIGS COUNTY.		
.....	Coal Ridge.....	Charter Oak.
shaft.....	Excelsior.....	Dabney.
slope.....	Enterprise.....	Silver Run No. 2.
in.....	Rose Hill.....	Pittsburg.
MUSKINGUM COUNTY.		
.....	.....	Diamond No. 2.
.....	.....	Weller.
Valley.....	.....	Granger.
MORGAN COUNTY.		
.....	.....	Black Diamond.

DETAILED LIST OF MAPS FILED DURING THE YEAR, Etc.

NOBLE COUNTY.		
Glenwood .....	.....
PERRY COUNTY.		
Rock Run No. 3.....	No. 5.....	No. 8.
No. 21	Upson No. 1.....	Congo No. .
Hemlock No. 20.....	No. 37.....	Manley or I
No. 13	Buckeye No. 5.....	No. 75.
No. 11	No. 51.....	No. 67.
No. 77	No. 9.....	No. 39.
No. 47	No. 49.....	Keystone N
Mingo	No. 79.....	No. 18 (C.)
No. 35	Congo No. 2.....	Lyonsdale,
No. 69	No. 18.....	Chestnut Ri
PORTAGE COUNTY.		
Hutson No. 2.....	Hutson No. 4.....	Hutson No.
SCIOTO COUNTY.		
North .....	.....
STARK COUNTY.		
Warwick No. 4.....	.....	New Green
Summit Hill .....	.....	North Mass
Wainwright or Woodland.	.....	Central No.
Lake Erie No. 2.....	.....	Eureka.
Failor .....	.....	Warwick N
Stanwood No. 8.....	.....
Singer Shaft No. 1.....	.....	Tallyho No.
McGinty .....	.....	West Brook
Indian Run .....	.....	Stark.
Oakwood No. 16.....	.....	No. 13.
SUMMIT COUNTY.		
Turkey Foot .....	.....	Fox Lake.
TUSCARAWAS COUNTY.		
Somerdale, North .....	.....	Tunnel Slop
Dew, West .....	.....	Massillon P
Dew No. 2.....	.....	Buck Horn.
Midvale No. 2.....	.....	Manle Grov
Midvale No. 4.....	.....	Morey Ridg
Midvale No. 5.....	.....	Houk.
Acme .....	.....	Laughlin or
Eagle Hill .....	.....	Horn No. 5
Goshen No. 2.....	.....	Tunnel Slop
Huffs Run .....	.....	Erhard.
Shanesville .....	.....	Swan.
East Goshen No. 1.....	.....
East Goshen No. 2.....	.....	Eagle Hill.
Thompson Run, East.....	.....	Dennison.
Thompson Run, West.....	.....	Novelty Bri

ED LIST OF MAPS FILED DURING THE YEAR, Etc. — Concluded.

	VINTON COUNTY.	
.....	.....	Raccoon.
	WAYNE COUNTY.	
No. 2.....	.....	Billman.

TABLE DESIGNED TO EXHIBIT THE NUMBER OF MAPS
HAVE BEEN FILED AS THEY OCCUR IN EACH COUNTY
STATE FROM 1874 TO 1891 INCLUSIVE.

Counties.	Maps Filed.						
	Prior to 1884.	Prior to 1888.	Prior to 1894.	During 1897.	During 1898.	During 1899.	During 1900.
Athens	10		28	23	10	20	13
Belmont	6		8	17	10	6	13
Carroll		2	5		6	2	2
Columbiana	12	1	8	23	6	3	9
Co-hocton			3	5	4	1	4
Gallia			1				
Guernsey	2		4	7	1	10	13
Harrison				1	1		
Holmes							
Hocking	1	3	12	8	3	5	2
Jackson	1		8	15	22	17	17
Jefferson	2		7	10	1	11	10
Lawrence	3		4	2	2		7
Mahoning	4		13	7	2	4	
Medina	1	2	5	1	3	3	6
Meigs	6		8	6			5
Morgan			1	1		1	
Monroe							
Muskingum			4	6	7	6	6
Noble		1			1		
Perry	10		17	18	13	35	20
Portage			4		1	4	3
Scioto				1	1		
Stark	7		21	11	15	10	21
Summit	3	1	7	2		1	1
Trembulla	10	1	10	2			
Tuscarawas	1	1	10	6	7	10	20
Vinton	2			2		1	2
Washington							1
Wayne	1		1	3	3	2	2
Totals	82	12	188	178	119	152	177

SEALING OF OIL WELLS.

At the close of the year 1901 seventy-five oil wells were sealed as reported to this office. This increased falling off in the number of wells sealed during the preceding year was in all probabilities due to the case which was pending in the Supreme Court of the State of Ohio to test the constitutionality of an act passed by the General Assembly on April 14, 1900, requiring that a fee of five dollars accompany each application filed for the purpose of drilling wells for oil or gas on land underlaid with mineral stone coal, and at the close of the year was still untried.

The number of wells that were drilled during the year as reported to this office were sealed by six of the District Mine Inspectors, the number being fifty-nine. Three were sealed by H. C. Kraft, and sixteen cellaneously.

The following statement gives the list of firms making application for license as required by law during the year, the number of licenses issued to each, together with an itemized statement of the fund accruing from this source, and the disbursements for the year.

Jennings Bros. & Co., Pittsburg, Pa., one (1) license.....	\$5 00
Rogers & Co., Moundsville, W. Va., one (1) license.....	5 00
Gillispie, Pittsburg, Pa. two (2) licenses.....	10 00
United States Gas Co., Parkersburg, W. Va., eight (8) licenses.....	40 00
Oil Co. Reinersville, O., one (1) license.....	5 00
Oil Co., Findlay, O., thirty-one (31) licenses.....	155 00
Dessecker, Waynesburg, O., one (1) license.....	5 00
Levy Oil Co., Glouster, O., two (2) licenses.....	10 00
Black Oil and Gas Co., Augusta, O., one (1) license.....	5 00
Allen & Gorman, Oakdale, Pa., one (1) license.....	5 00
Fire Valley Oil and Gas Co., Palmero, O., one (1) license.....	5 00
Wilson Oil Co., Cadiz, O., four (4) licenses.....	20 00
Bridge Light and Fuel Co., Cambridge, O., four (4) licenses.....	20 00
Wyre Creek Oil and Gas Co., Mingo Junction, O., three (3) licenses.....	15 00
Black, Barnesville, O., two (2) licenses.....	10 00
Dixon, Cadiz, O., one (1) license.....	5 00
Dettre, Byesville, O., three (3) licenses.....	15 00
Oil Co., Pittsburg, Pa., three (3) licenses.....	15 00
Wy, Singleton & Co., Woodsfield, O., one (1) license.....	5 00
Phillips & Co., Bowerstown, O., two (2) licenses.....	10 00
Shannon, Lore City, O., one (1) license.....	5 00
Oil Co., Glouster, O., one (1) license.....	5 00
	<hr/>
	\$375 00
Balance on hand at the close of the year 1900.....	41 15
	<hr/>
Total amount on hand at the close of the year 1901.....	\$419 15

DISBURSEMENTS FOR THE YEAR 1901.

Clerk hire	January 15	.....
"	February 14	.....
"	February 28	.....
"	April 3	.....
"	August 14	.....
"	September 16	.....
"	September 30	.....
"	December 14	.....
"	December 30	.....
		—
Total amount on hand at close of the year		.....
Total amount of disbursements during the year		.....
		—
Balance on hand at close of the year 1901		.....

FIRE CLAY PRODUCTION FOR THE YEAR.

The statistics collected by this Department relating to the Fire Clay industry for the year 1901 when compiled show a marked decrease in the production over that of former years.

This would indicate that the demand for this material has not been what it formerly was. That there was a decline in the amount consumed in other years are taken into consideration.

This may be attributable to the fact that the amount of clay made in paving brick, for which this material is best adapted, has not been in demand as in former years. Its success in this direction has not been what was anticipated. Take our Capital City for instance; during the three or four years there was laid in the city streets one hundred and twenty-six miles of paving brick valued at \$10,000,000. During the year there was probably not four miles of streets paved with this material. It has proven to be a cheaper material for this purpose, and more satisfactory.

From the following table it will be seen that there were produced in the year 1901 one million, three hundred and thirty-seven thousand, hundred and eighty-one tons of Fire Clay mined. This represents one hundred and thirty-five thousand, nine hundred and seven tons less was produced in the year 1900.

The number of miners engaged in mining fire clay was seven hundred and ninety-eight, or a loss of thirty-one in the number so employed in the previous year. The number of persons engaged in manufacturing this material was three thousand, eight hundred and eleven, or a loss of four as compared with the year 1900.

The Fire Clay purchased amounted to four thousand eight hundred and twenty tons, four thousand, six hundred and two tons of which was consumed by Jackson County.

Fire Clay was produced in seventeen counties of the State, nine of which report gains and eight show losses.

The greatest amount of fire clay was produced in Stark County, that county alone producing two hundred and eighty thousand, and ninety-ton tons; Summit County reported two hundred and four thousand, hundred and twenty-four tons, Jefferson, one hundred and forty-five hundred, and fifty, and Columbiana one hundred and forty-three thousand, two hundred and fifty-nine tons.

The greatest gains occur in Summit County, where the gain was one hundred and thirteen thousand, five hundred and forty tons; Carroll a gain of fifteen thousand, seven hundred and sixty, and Hocking a gain of one thousand, seven hundred and twenty-eight tons. The immense gains reported by Summit County represents two-thirds of the total gains reported.

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The greatest losses are found in Jefferson County, where it amounted to one hundred and thirteen thousand, two hundred and forty tons, followed by Tuscarawas with a loss of forty-seven thousand, eight hundred and seven, and Columbiana County with a loss of forty thousand five hundred and eighty-five tons.

The second table represents the fire clay production from the year 1884 to 1901 inclusive.

[illegible]

TABLE SHOWING FIRE CLAY OUTPUT OF THE STATE DURING THE YEAR 1901 AS COMPARED WITH THE YEAR 1900 — Concluded.

Counties	1900.						1901.						Employees.		Output.	
	No. days worked.	No. men employed.	No. hands engaged in the manufacture.	No. tons mined.	No. tons purchased for manufacturing wares.	No. days worked.	No. men employed.	No. hands engaged in the manufacture.	No. tons mined.	No. tons purchased for manufacturing wares.	Gain in miners.	Loss in miners.	Gain in hands employed in manufacture.	Loss in hands employed in manufacture.	Gain in tons mined.	Loss in tons mined.
Vinton	12	1	1	36		13	16	1	589		15				553	
Wayne	265	1	22	1,178		235	4	20	4,500					2	92	
Totals		829	3,815	1,173,088	13,088		798	3,811	1,337,181	4,806	89	120	793	797	151,925	287,832
Average	173					181										
Net loss												31		4		135,117

TABLE SHOWING THE FIRE CLAY PRODUCTION OF THE STATE
FROM JANUARY 1, 1884, TO DECEMBER 31, 1901.

Years.	Output Tons.	Gain.	Loss.
.....	168,208	.....	.....
.....	153,756	.....	14,452
.....	266,709	112,953	.....
.....	366,476	99,767	.....
.....	471,794	105,313	.....
.....	574,129	102,335	.....
.....	833,159	259,030	.....
.....	1,087,560	254,401	.....
.....	1,253,110	165,550	.....
.....	1,032,348	.....	220,762
.....	942,913	.....	89,435
.....	844,832	.....	97,081
.....	827,450	.....	17,382
.....	822,727	.....	4,723
.....	1,026,922	204,195	.....
.....	1,173,697	146,775	.....
.....	1,473,088	299,391	.....
.....	1,337,181	.....	135,907

PRODUCTION OF IRON ORE.

The production of Iron Ore in the United States during the year according to the United States Geological Survey, amounted to 28,88 tons as compared with 27,553,161 long tons in the year 1900, a gain of 1,334,318, or five per cent. The gain of 1901 over that of the year was forty-nine per cent, showing a phenomenal growth. The total of the ore mined during the year 1901 was reported to be \$49,256.245 mean value of \$1.71 per ton.

Twenty-five States and Territories mined iron ore during the 1901. Minnesota advanced to first place in point of production, surpassing Michigan, which has since the year 1881 uninterruptedly held place. The greater portion of Iron Ore in the United States still continues to be supplied by the Lake Superior Region, which produced maximum output of 21,445,903 long tons in the year 1901, or seventy-four per cent of the entire output of the United States.

Only five thousand, one hundred and sixty-three long tons of bonate iron ore was mined during the year. Practically all of this from the State of Ohio, although small amounts were contributed by Maryland, New York and Pennsylvania.

From the statistical blanks sent out requesting the output of Ore by this Department during the year the returns received showed forty-one thousand, three hundred and twenty-five tons were mined as compared with a loss of two thousand, nine hundred and forty-one tons as compared with the previous year.

This is a decided decrease in point of production when compared with fifty-two thousand, two hundred and sixty-six tons that were turned during the year 1900.

Losses occur in Lawrence and Scioto Counties amounting to two thousand, four hundred and sixty-three and fourteen thousand, hundred and thirty-nine tons respectively.

According to information published in the Iron Trade Review the greatest record of any blast furnace in the world was made at the No. Two Stack of the Ohio Plant of the National Steel Co., located at Yontown, Ohio, when eight hundred and six tons of iron were produced one day. Several weeks previous to this a plant located at Rankin produced seven hundred and ninety tons in twenty-four hours. This is a phenomenal record, and at the time it was believed that a long time would elapse before this record would be eclipsed or even equalled. The No. 1 stack of the National Steel Co.'s furnace is one hundred and five feet high and was completed during the year.

TABLE SHOWING THE PRODUCTION OF IRON ORE BY COUNTIES DURING THE YEARS 1900 AND 1901, AND THE LOSS AND GAIN IN EACH COUNTY.

Counties.	1900.	1901.	Gain.	Loss.
son	8,155	5,000	.....	3,155
rence	27,134	21,463	.....	5,671
to	16,177	14,839	.....	1,338
on	800	23	.....	777
Totals	52,266	41,325	.....	10,941

TABLE SHOWING THE IRON ORE PRODUCTION OF THE STATE FROM 1884 TO 1900 INCLUSIVE.

Years.	Blackband.			Hematite.			Total.
	Output Tons.	Loss.	Gain.	Output Tons.	Loss.	Gain.	
.....	.....	.....	.....	.....	.....	.....	276,286
.....	70,931	.....	.....	188,646	.....	.....	259,577
.....	83,947	.....	13,012	260,537	.....	71,891	344,484
.....	87,965	.....	4,018	289,500	.....	28,963	377,465
.....	82,054	5,911	.....	171,298	118,202	.....	253,352
.....	70,398	11,656	.....	182,011	.....	10,713	252,409
.....	41,848	28,550	.....	127,240	54,771	.....	169,088
.....	15,540	26,308	.....	52,444	74,796	.....	67,984
.....	8,680	6,860	.....	81,042	.....	28,598	89,722
.....	3,837	4,843	.....	64,423	16,619	.....	68,260
.....	.....	3,837	.....	58,043	6,380	.....	58,043
.....	.....	.....	.....	93,051	.....	35,008	93,051
.....	.....	.....	.....	70,765	22,286	.....	70,765
.....	.....	.....	.....	50,267	20,498	.....	50,267
.....	.....	.....	.....	51,659	.....	1,392	51,659
.....	.....	.....	.....	25,359	16,800	.....	25,359
.....	.....	.....	.....	52,266	.....	26,907	52,266
.....	.....	.....	.....	41,325	10,941	.....	41,325
1900	465,204	87,965	17,030	1,859,876	341,293	.....	2,601,366

THE YEAR'S PRODUCTION OF LIMESTONE.

The limestone industry for the year that has just closed shows increases in six of the several classifications into which this product is prepared for the market, while losses occur in three.

The first table is designed for the purpose of showing the average time worked in the quarries during the year, the number of men employed and the number of tons of two thousand pounds each burned for lime fluxing, number of cubic feet of dimension stone, ordinary building stone, cubic yards used for piers and protection, square feet of flagging, paving and lineal feet of curbing; also the number of cubic yards used for ball and macadam.

Of the forty-one counties producing limestone the greatest gain in the number of persons employed occurs in Van Wert, where a gain of hundred and ninety-seven is found in the number of persons employed in the quarries. Ottawa follows second with a gain of one hundred seventy-five.

The greatest loss in the number employed is found in Scioto County where there was a falling off of two hundred and thirty-four persons compared with the year 1900.

The total number of persons employed in the industry during the year 1901, was four thousand, one hundred and thirty-five, a gain of one hundred and sixty-seven compared with the preceding year.

The average time worked during the year as compared with the previous year shows a gain of fourteen days.

The second table was designed to exhibit the gain and loss in the production of lime with year 1900 in the several counties in which the product is quarried.

The third table represents the total annual production in each classification of limestone from the time of which any record was kept up to the present time.

The number of tons of stone burned for lime during the year is given at 554,523 tons or a gain of 7477 over that of the previous year. Of thirty counties making returns seventeen show gains and thirteen losses. Delaware reported the greatest gain of 65,358 tons of stone burned for lime. The greatest loss occurs in Erie where it amounted to 47,512.

Under the classification of stone used for fluxing it will be seen that the year's production amounted to 1,419,087. This represents a gain of 482,196 tons in this classification when we compare the results with those of the previous year. The greatest gain is found in the counties of Ottawa and Franklin, where the increases were found to be 212,435 and 164,684 tons respectively.

From that portion of the table devoted to dimension stone it will be observed that the amount of stone quarried for this purpose amounted to 318,995 cubic feet. Gains amounting to 152,719 occur in this classification.

ion of limestone, the greatest occurring in Maumee County, where it amounted to 69,235 tons. Gains were reported in eleven counties and losses in eight.

By an examination of the column showing the returns for building we find that 304,312 cubic yards of this material was used during the year. This represents a gain of 29,393 tons over that of the previous year. Eighteen counties report gains, and sixteen losses in this classification of limestone. Seneca County shows the greatest gain of 29,329 cubic yards.

The returns of limestone quarried which was used for piers and projections represents gains aggregating 14,610 cubic yards. Losses are found in the amount of square feet used for flagging, amounting to 28,660, that for paving, 15,658; curbing, 2,722, while the number of cubic yards of stone used for ballast and macadam shows a gain of 280,537.

INSPECTOR OF MINES.

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Counties.	Average number of days worked.	Number of men employed.	Number of tons burned for lime.	Number of tons burned for flint.	Cubic feet of dimension stone.	Cubic yards of ordinary building stone.	Cubic yards for and protection poses.	Square feet of gring.	Square feet of ing.	Lineal feet of cing.	Cubic yards of last and macadam.
Muskingum	50	2	730		186						50
Mercer	280	5	132,532	672,313	260	27,564					101,597
Ottawa	216	700	849		2,363						38,000
Paulding	91	80					83	600		1,975	
Pickaway	125	2			1,825						
Pike	30	3	95								
Preble	145	74	2,625		21,000	12,957	615	3,500	250	2,070	2,630
Putnam	102	74	147			15,996	791	10,000			13,300
Sandusky	237	47	15,572			8,625					6,120
Summit	175	3	517								
Seneca	173	132	20,449		19,000	39,903	10,000	310		300	101,415
Stark	225	25	42,060								
Scioto	221	79		21,087	33,997	7,557		6,648			
Union	20	3			200			100			
Van Wert	174	264	3,840			2,432					358,795
Vinton	150	25	3,170								
Wood	161	160	10,675			4,436	1,200				33,000
Average	154										
Totals		4,135	554,523	1,419,087	318,995	304,312	134,874	103,177	48,512	137,828	1,551,378

TABLE SHOWING THE COMPARATIVE GAIN AND LOSS IN THE VARIOUS CLASSIFICATIONS OF LIMESTONE,
THE PRODUCTION OF 1901 BEING COMPARED WITH THAT OF 1900.

Counties.	Days.		Men.		Lime.		Fluxing.		Dimension.		Building.		Protection.		Flagging.		Paving.		Curbing.		Macadam.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
Adams	43	22	10		94		1,090				40				10,087	19,135					1,500	
Allen	37	140	6		2,960	210	70		1,068		1,068		1,002								29,396	2,000
Belmont	23		2								171											
Butler	41		3		2,919		28,148		51	5,253			229	788							8,355	91
Clark	2								1,390	3,616											1,502	
Clemont	10		3						143		655										1,156	
Crawford	37		18		99										815		894		500		4,195	
Critton	13		12						5,315		38		10		710				655		6,495	
Delaware	129		9	65,358			3,721	26,750														
Darke	11		12		93							503										
Erie	50	7	10		47,512		47,512		9,908													
Franklin	17		34		12,161,684		600		26,335		3,626		21,090	2,400							57,169	32,118
Galla	32		7						7,453		7,453		15,558	600					800			
Greene	17		1		1,571																	
Hamilton	32		34		180				1,643		3,758		950		1,020		350				1,000	
Hancock	13		20									4,327	75				4,000				1,940	
Hardin	14		51								118		836								8,065	
Higland	10		2						92		4,810	36									16,238	
Holmes	38		12												15,556		6,478					
Jackson	25		3																			
Jefferson	37	40	3					7,818													100	
Lawrence	42		11																		350	
Logan	36		36																			
Lucas	79	31	10		6,071				1,000		865	555									96,000	
Marion	4		5		48,213				4,874		6,304										22,421	
Miami	4		5		1,243				69,255		5,620	1,689										
Montgomery	27		10	35,840																	6,229	
Muskingum	42		2																			
	150		9		1,696																	
			2																			
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Counties.	Roads.				Fencing.		Dams and Dredging.		Building.		Protection.		Flagging.		Paving.		Curbing.		Macadam.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
Summit	175		517						29,329		10,000						300			
Seneca	22	200	3,357	2,210			13,680												69,901	
Shelby			6																	
Stark	17		2,114						2,500				5,325							
Stoddard	36	10	294		7,768		30,470													
Union							500				70									
Van Wert	40	107	1,080																210,375	
Vinton	120	25	3,170																	
Wood			6				5,430				2,414		100							31,500
Total	1,312	1,043	770	4,001	29,554	132,077	18,029	176,887	82,806	53,443	41,475	29,867	41,787	70,447	28,283	43,801	8,220	10,048	517,338	230,180
Gain	339		7,477		182,106		137,719		29,308		14,610								2,722	380,537
Loss															15,658					

TABLE SHOWING THE COMPARATIVE PRODUCTION OF LIMESTONE IN OHIO FROM 1886 TO 1901, INCLUSIVE.

Years.	Average number days worked.	Number of men employed.	Number tons of lime burned for lime.	Number tons of 2,000 pounds each burned for fluxing.	Cubic feet of Dimension stone.	Cubic yards of ordinary building stone.	Cubic yards for piers and protection purposes.	Square feet of flagging.	Square feet of paving.	Lineal feet of curbing.	Cubic yards of ballast and macadam.
1886	149	2,383	517,270	328,080	568,697	295,231	63,050	187,900	154,636	60,650	186,810
1887	182	2,767	619,027	478,674	950,393	385,247	78,932	350,954	289,195	139,174	416,018
1888	165	3,025	602,074	666,481	1,795,038	.....	78,381	580,901	313,855	205,227	445,770
1889	165	2,631	849,442	235,298	898,886	364,685	69,876	413,400	586,361	209,339	354,544
1890	171	2,445	689,827	308,521	333,077	270,367	81,414	673,850	507,313	165,434	432,650
1891	143	3,286	744,946	284,478	634,901	361,637	65,295	417,855	4,948,939	200,756	622,194
1892	132	3,353	631,049	217,981	1,057,157	323,600	48,102	171,567	2,883,208	101,820	764,784
1893	149	2,929	396,690	108,376	748,712	290,614	57,374	226,654	393,883	209,327	757,142
1894	138	2,484	349,631	240,173	1,393,792	181,722	22,839	206,736	312,868	144,042	435,764
1895	127	3,829	1,175,988	429,632	500,648	253,900	48,675	573,634	640,836	152,873	650,217
1896	132	3,186	397,102	623,544	260,289	215,900	29,114	137,579	163,373	71,236	553,329
1897	131	3,396	481,871	320,437	371,741	248,392	97,548	145,331	113,025	55,108	629,044
1898	132	3,149	624,921	571,029	605,172	368,343	47,762	71,606	43,256	52,940	729,896
1899	142	3,165	626,274	791,701	405,112	264,640	87,099	100,133	81,796	57,091	864,349
1900	141	3,680	547,046	882,426	166,276	274,919	120,264	131,837	64,170	40,550	1,263,416
1901	154	4,135	554,523	1,419,087	318,985	304,312	134,784	103,177	48,512	37,828	1,551,378
Gain	13	367	7,477	482,196	152,719	29,393	14,610	.....	.....	.....	280,537
Loss	.....	.....	.....	.....	.....	.....	.....	28,600	15,658	2,722	.....

CASUALTIES DURING THE YEAR.

The total number of accidents of all classes reported during the year amounted to 514. Of this number 72 resulted fatally, 276 were of a serious nature, and 166 were of a minor character.

The total number of fatal accidents for the year was 72, which was more than occurred in the year 1900, and thirteen more than was reported for the year 1899. However, as the tonnage of coal for the past years has been steadily on the increase, the number of accidents correspondingly increased. The number of tons of coal mined to the life for 1901 was 282,240; for the year 1900, 285,692; for the year 1899, 643.

Of the thirty coal producing counties sixteen are accountable for the number of fatal accidents reported for the year. Jackson county reports Guernsey 11, Jefferson and Tuscarawas each 8, and Athens and Belmont each 5. These counties furnish 68 per cent. of the entire number of accidents for the year.

Jefferson county shows the greatest gain in the number of fatal accidents, where six more occurred than was reported for the preceding year; Tuscarawas shows a gain of four, followed by Portage with a gain of three.

The number of serious accidents returned during the year is 69 in excess of the number reported for the year 1900, the total number being 276. These occurred in 20 counties producing coal.

Guernsey county shows the greatest gain in the number of serious accidents, where gains to the number of 16 are found, followed by Jefferson with 14, and Jackson and Tuscarawas each of these counties registering a gain of 9 serious accidents as compared with the preceding year.

The counties reporting the greatest number of serious accidents were Guernsey with 44, Belmont with 33, Jackson with 30, Athens 27, and Stark 25.

For the year 1901, one hundred and sixty-six minor accidents were reported to this Department. This number represents a slight gain of seven when compared with the minor accidents reported during the year 1900.

Guernsey county not only leads the list with the greatest number of serious accidents but in the number of minor as well. The total number of accidents which was of a minor nature this county reported 71; Jackson turned 63, Belmont 50, Jefferson 49 and Stark 48.

The greatest gain in the number of minor accidents occur in Jefferson county, which shows a gain of 39; Tuscarawas 20, Jackson 15, Guernsey 14, and Meigs county 10.

TABLE SHOWING THE NUMBER OF FATAL, SERIOUS AND ACCIDENTS AND THE NUMBER OF EACH CLASSIFICATION OCCURRED IN EACH COUNTY.

Counties.	Fatal.	Serious.
Athens	5	27
Belmont	5	33
Carroll	2	1
Columbiana	3	8
Coshocton	1	6
Gallia		
Guernsey	11	44
Harrison		3
Holmes		
Hocking	3	18
Jackson	12	30
Jefferson	8	21
Lawrence		8
Mahoning		
Medina	2	4
Meigs	1	4
Morgan		
Monroe		
Muskingum	1	1
Noble		2
Perry	4	24
Portage	3	3
Scioto		
Stark	3	25
Summit		
Trumbull		
Tuscarawas	8	17
Vinton		
Washington		
Wayne		2
Totals	72	276

SHOWING A COMPARISON OF THE CASUALTIES OF 1901 AS
COMPARED WITH 1900.

nties.	1900.				1901.				Gain.	Loss.
	Fatal.	Serious.	Minor.	Total.	Fatal.	Serious.	Minor.	Total.		
.....	9	31	21	61	5	27	12	44	.....	17
.....	5	26	21	52	5	33	12	50	.....	2
.....	3	5	4	12	2	1	2	5	5	.....
ina	.....	3	6	9	3	8	9	20	8	.....
n	.....	.....	.....	.....	1	6	4	11	2	.....
.....	11	28	18	57	11	44	16	71	14	.....
.....	.....	.....	.....	.....	.....	3	.....	3	3	.....
.....	1	.....	.....	1	.....	.....	.....	.....	.....	1
.....	2	14	6	22	3	18	5	26	4	.....
.....	12	21	15	48	12	30	21	63	15	.....
.....	2	7	1	10	8	21	20	49	39	.....
.....	.....	1	1	2	.....	3	1	4	2	.....
.....	.....	.....	.....	.....	.....	.....	1	1	1	.....
.....	1	1	2	4	2	4	.....	6	2	.....
.....	1	2	2	5	1	4	10	15	10	.....
.....
.....	3	.....	2	5	1	1	1	3	.....	2
im	.....	.....	.....	.....	.....	2	1	3	3	.....
.....	5	25	20	50	4	24	13	41	.....	9
.....	.....	1	6	7	3	3	2	8	1	.....
.....	1	.....	.....	1	.....	.....	.....	.....	.....	1
.....	7	31	16	54	3	25	20	48	.....	6
.....	.....	2	.....	2	.....	.....	.....	.....	.....	2
.....	4	8	7	19	8	17	14	39	20	.....
as	1	1	.....	2	.....	.....	.....	.....	.....	2
on	.....	.....	1	1	.....	2	2	4	3	.....
.....	68	207	149	424	72	276	166	514	132	42

TABLE SHOWING THE COMPARISON OF THE ACCIDENTS (RING DURING 1900 AND 1901.

Counties.	Fatal.		Serious.		Gain.
	Gain.	Loss.	Gain.	Loss.	
Athens		4		4	
Belmont			7		
Carroll	2		1		
Columbiana			3		
Coshocton	1		3		
Gallia					
Guernsey			16		
Harrison			3		
Hocking	1		4		
Holmes	1	1			
Jackson			9		
Jefferson	6		14		1
Lawrence			2		
Mahoning					
Medina	1		3		
Meigs			2		
Monroe					
Morgan					
Muskingum		2	1		
Noble			2		
Perry		1		1	
Portage	3		2		
Scioto		1			
Stark		4		6	
Summit				2	
Tuscarawas	4		9		
Trumbull					
Vinton		1		1	
Washington					
Wayne			2		
Totals	18	14	83	14	5

SOURCES TO WHICH ACCIDENTS ARE ATTRIBUTABLE.

Statistics from all countries still continue to prove that more fatal accidents are attributable to falls of roof and from coal falling at the face and in the mine passages than are attributed to any other cause. If there was a law enacted regulating the timbering of working faces, and a strict observation of same was demanded, it would tend to lessen the number of fatal accidents occurring in the coal mines more than any other statute that could be enacted.

No subject should be of greater interest to the miner, mine superintendent or operator, than that of timbering. The old saying that "A good timber is more dangerous than a poor one," justifies us in coming to the conclusion that the greatest element of danger to which the miner is exposed is that of his own habit of procrastination. He is aware of the fact that a bad piece of top or a stone needs a post, but he has failed to do so that the imperative need is "now." It seems that owing to the constant danger to which their lives are subjected renders them indifferent to the matter.

Falls of roof were accountable for 38 fatal, 107 serious and 46 minor accidents during the year. This was one less than the number of fatal accidents due to this cause as reported for the preceding year.

The total number of accidents attributed to falls of roof amounted to 151, nineteen more when compared with the year 1900. This represents 52 and 8-10 per cent of the year's fatal accidents, 35 and 1-10 per cent of the serious and 27 and 7-10 per cent of the minor, or 37 and 1-10 per cent of the entire number of accidents. The total number of accidents due to falls of roofs and mine cars represent 65 and 5-10 per cent of the number of accidents.

Mine cars furnish 66 2-3 per cent of the number of fatal accidents, 68 and 1-10 per cent of the number of serious, and 61 and 4-10 of the number of minor accidents.

Mine cars come second in order in the number of fatal accidents due to this cause, being responsible for ten deaths, the same as reported from this cause last year. The total number of accidents attributed to mine cars was 147, 10 of which were fatal, 81 were serious and 56 minor. Collectively they form 28 and 6-10 per cent of the total number of casualties.

The careless handling of explosives resulted in 6 fatal accidents, 11 serious and 9 minor accidents. In many instances these accidents are due to men returning too soon to examine shots which have failed to explode in the time they deem necessary for the explosion to take place, before they are aware of the pending danger the shots explode with warning.

The use of mining machines as reported is responsible for 7 serious minor accidents, no fatal resulting from this cause as reported to the office.

Three fatal accidents were caused from the presence of fire detailed account of which will be found under the article reprinted from the report of the Commission on the subject of mines which generate fire damp. One serious and two minor accidents are also attributable to this source of danger to which the mine is exposed.

The number of accidents which are classified as miscellaneous amounted to 6 fatal, 15 serious and 17 minor, or 7.3-10 per cent of the entire number of casualties.

Two hundred and eighty-two thousand, two hundred and fifty tons of coal were mined to the life lost during the year 1901, or one accident for every four hundred and sixty-five and one-third persons employed in the mining industry.

The returns also show that five hundred and fourteen persons were injured, or one to every sixty-five and one-fifth persons employed in the mining of coal.

SHOWING THE NUMBER AND CHARACTER OF THE ACCIDENTS OCCURRING DURING THE YEAR, AND TO WHAT SOURCES THEY WERE ATTRIBUTABLE.

Causes.	Fatal.	Serious.	Minor.	Totals.	Percentage.
of.....	38	107	46	191	37.1
al.....	4	42	16	62	12.0
.....	10	81	56	147	28.6
explosion	3	7	7	7	3.3
of gas.....	3	1	2	6	1.1
ler cage.....	2	1	4	7	1.3
horses.....	.....	5	7	12	2.3
mber.....	1	2	3	6	1.1
vn shaft.....	1	1	.....	2	.3
tipple.....	.....	1	.....	1	.1
ig through rib.....	1	2	1	4	.7
chines .....	.....	7	5	12	2.3
of powder.....	3	4	2	9	1.7
us	6	15	17	38	7.3
s	72	276	166	514	.....

TABLE SHOWING THE NUMBER AND CHARACTER OF ACCIDENTS WHICH RESULTED FROM THE PRINCIPAL SOURCES AS REPORTED FROM EACH COUNTY.

Counties.	Fall of Roof.			Falls of Coal.			Injured by Mine Cars.			Premature Ex-plosion.			Ex-plosion of Fire Damp.			Miscellaneous.		
	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.
Athens	4	9	1	...	2	3	...	7	4	...	1	...	...	...	...	1	8	4
Belmont	3	20	4	...	5	...	...	5	3	...	...	...	...	...	...	2	3	5
Carroll	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Columbiana .....	...	12	5	1	1	...	...	2	2	...	1	...	...	1	...	2	1	2
Coshocton .....	...	2	2	...	...	...	1	4	2	...	...	...	...	...	...	...	...	...
Gallia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guernsey	6	15	2	...	6	1	4	16	7	...	1	...	...	...	...	1	6	6
Harrison .....	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Holmes .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hocking	1	1	4	...	6	...	1	8	1	...	...	...	...	...	...	1	3	...
Jackson	5	15	5	...	2	2	...	7	4	4	2	4	...	...	...	3	4	6
Jefferson	4	10	7	...	2	...	...	7	9	...	...	...	3	...	1	1	2	3
Lawrence .....	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Mahoning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Medina .....	...	...	...	...	2	...	2	2	...	...	...	...	...	...	...	...	...	...
Meigs .....	...	2	2	1	...	...	...	1	...	...	...	...	...	...	...	...	1	8
Morgan .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monroe .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muskingum	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Noble .....	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Perry	2	9	6	1	3	2	1	9	5	...	...	...	...	...	...	...	3	...
Portage	2	2	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1
Scioto .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stark	2	12	1	1	3	6	...	6	9	...	1	1	...	...	1	...	3	2
Summit .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Warren .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Washington	6	3	4	...	6	1	1	7	6	...	1	3	1
Wayne	1	2	1	...
Totals	38	107	46	4	42	16	10	81	56	4	9	8	3	1	2	13	36	38

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Years.	Falls of roof.	Falls of coal.	Injured by mine	Premature explosi	Explosion of gas.	Falls down shafts	Crushed under cag	Falls from tippie.	Kicked by mule horse.	Injured by rail- cars.	Falls of timber.	No cause given.	Shot blowing thro rib.	Injured by min pick.	Heart failure.	Electric wires.	Injured by mining chines.	Miscellaneous.	Totals.
1888	100	47	46	13	4	1	8	3	2	2	1	5	1	1	1	1	1	9	238
1889	92	50	48	12	4	1	1	1	4	2	1	3	1	1	1	1	1	11	230
1890	109	44	59	13	4	1	1	1	4	1	1	3	1	1	1	1	1	7	245
1891	112	26	47	24	6	1	3	1	5	1	4	1	1	1	1	1	1	14	242
1892	126	41	73	21	3	2	8	1	4	3	2	1	1	1	1	1	1	11	291
1893	118	55	88	17	3	1	1	2	4	1	2	1	1	1	1	1	1	14	327
1894	98	39	60	17	4	5	4	1	1	1	3	1	2	1	1	1	1	15	257
1895	108	46	67	23	5	1	3	1	4	1	1	1	3	1	2	1	1	8	303
1896	133	34	74	20	7	1	1	1	6	1	1	1	3	1	1	1	1	10	277
1897	98	48	70	16	5	1	1	1	6	1	1	1	4	1	1	1	1	7	341
1898	156	47	69	8	13	3	3	2	3	3	3	1	4	1	1	1	1	14	390
1899	153	52	100	20	10	3	3	2	6	5	4	1	3	1	3	1	1	13	424
1900	172	62	104	26	6	4	4	1	6	5	4	1	1	3	1	1	1	9	514
1901	191	62	147	14	6	2	7	1	12	1	6	1	4	1	1	1	1	50	514
Totals	1,766	653	1,052	244	76	29	46	18	70	31	32	11	29	17	14	4	53	207	4,850

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE LIFE LOST, TO THE SERIOUS INJURY AND TO THE TOTAL NUMBER OF FATAL AND SERIOUS ACCIDENTS FOR EACH YEAR SINCE THE CREATION OF THE DEPARTMENT.

Years.	Number of Fatal Accidents.	Number of Serious Accidents.	Number of Tons Mined to the Person Killed or Seriously Injured and Number of Tons to the Total.			Name of Chief M Inspector.
			Fatal.	Serious.	Total.	
1874.....	20	80	108,919	4,844	31,419	Andrew Roy.
1875.....	23	40	202,667	121,606	77,210	"
1876.....	13	70	269,999	50,000	42,168	"
1877.....	30	39	175,000	134,615	76,087	"
1878.....	20					Jas. D. Poston.
1879.....						David Owen.
1880.....	22	61	292,624	114,754	84,217	Andrew Roy.
1881.....	29		283,621			"
1882.....	25		378,000			"
1883.....	26		316,516			"
1884.....	26	40	226,636	143,433	86,932	Thos. B. Bancroft.
1885.....	51	32	244,258	153,258	94,170	"
1886.....	43	65	194,308	194,772	78,104	"
1887.....	36	75	286,158	137,356	92,808	"
1888.....	29	79	376,239	138,113	100,934	Robt. M. Haseltine.
1889.....	33	52	330,527	209,757	128,322	"
1890.....	42	52	280,687	226,708	125,413	"
1891.....	44	66	296,595	197,730	118,636	"
1892.....	42	93	347,929	157,129	108,170	"
1893.....	32	123	463,378	120,553	95,665	"
1894.....	45	116	364,672	102,674	73,976	"
1895.....	52	152	263,151	90,025	67,078	"
1896.....	41	159	314,942	81,211	64,563	"
1897.....	40	142	311,221	87,668	68,400	"
1898.....	52	155	270,463	90,736	67,913	"
1899.....	59	204	269,643	77,985	60,490	"
1900.....	68	207	235,686	93,848	70,643	Elmer G. Biddison.
1901.....	72	276	282,240	73,627	58,394	"

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	1886.		Number of miners for each life lost.	1887.		Number of miners for each life lost.	1888.		Number of miners for each life lost.
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Colorado	165,387	.....	545	149,311	34,456	.....	75,361	27,319	602
Great Britain	214,909	.....	497	162,934	.....	551	191,369	.....	535
Illinois	428,571	66,126	.....	303,002	69,017	654	260,512	80,046	.....
Indiana	183,494	333,333	.....	227,323	56,830	.....	196,311	157,049	458
Iowa	.....	350,306	.....	224,297	52,356	799	177,401	49,832	.....
Kansas	235,714	61,111	.....	256,172	163,019	929	154,826	45,874	631
Kentucky	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland	.....	.....	.....	.....	.....	.....	.....	.....	.....
Missouri	50,654	21,709	206	.....	.....	.....	150,383	105,674	210
Montana	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nova Scotia	.....	.....	.....	238,691	167,083	.....	888,064	59,204	2,325
Ohio	194,309	129,772	474	286,158	137,356	618	376,239	138,113	765
Pennsylvania	175,311	53,672	440	169,327	151,900	512	166,532	56,849	361
Tennessee	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia	.....	.....	.....	.....	.....	.....	191,984	63,152	346

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO — Continued.

	1889.		Number of miners for each life lost.	1890.		Number of miners for each life lost.	1891.		Number of miners for each life lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Colorado	178,227	.....	530	104,375	31,385	239	121,126	27,230	227
Great Britain	333,745	69,738	716	286,316	51,955	539	261,012	42,672	549
Illinois	.....	.....	.....	1,239,429	578,400	936	.....	.....	.....
Indiana	.....	.....	.....	331,709	192,683	824	206,776	88,618	507
Iowa	98,600	52,772	321	314,506	125,802	955	250,339	78,678	813
Kansas	.....	.....	.....	233,089	101,343	406	184,383	.....	542
Kentucky	156,136	56,792	378	.....	.....	.....	380,084	285,063	437
Maryland	.....	.....	.....	243,739	87,049	765	147,223	82,813	413
Missouri	222,847	111,173	514	.....	.....	.....	.....	.....	.....
Montana	.....	.....	1,818	.....	.....	.....	.....	.....	.....
Nova Scotia	219,539	97,571	646	220,444	94,479	591	681,594	638,996	1,915
Ohio	330,527	209,757	615	280,687	226,708	456	296,595	65,910	545
Pennsylvania	150,202	56,789	144	154,257	58,235	181	131,980	64,814	287
Tennessee	.....	.....	.....	.....	.....	.....	109,295	43,718	263
Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia	.....	206,358	.....	206,358	54,450	327	202,262	104,020	363

	1892.		Number of miners for each life lost.	1893.		Number of miners for each life lost.	1894.		Number of miners for each life lost.
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	110,330	30,170	223	310,000	30,371	529	229,200	.....	470
Colorado	.....	.....	.....	146,234	.....	292	157,580	.....	.....
Great Britain	.....	.....	.....	289,124	49,503	513	237,688	32,848	534
Illinois	313,372	46,114	590	198,132	124,539	338	.....	.....	.....
Indiana	236,569	166,474	370	159,133	85,461	361	198,809	134,906	540
Iowa	202,373	87,988	465	221,687	47,245	659	138,893	68,136	388
Kansas	.....	.....	.....	291,854	132,090	939	295,719	155,642	803
Kentucky	378,412	151,364	1,186	665,549	415,968	814	443,140	238,614	.....
Maryland	510,818	170,273	661	151,926	122,709	369	125,438	82,271	255
Missouri	150,864	73,592	401	336,543	35,802	1,178	.....	.....	.....
Nova Scotia	161,898	48,589	.....	436,120	50,608	847	364,672	102,674	559
Ohio	347,929	58,634	642	167,711	68,270	382	151,521	66,776	401
Pennsylvania	177,983	76,166	454	.....	.....	.....	76,688	122,700	233
South Dakota	.....	.....	.....	128,633	24,396	457	170,102	52,205	314
Tennessee	166,619	80,437	415	418,049	41,804	829	.....	.....	.....
Utah	180,836	40,186	.....	134,317	31,812	314	.....	.....	.....
Washington	20,738	27,157	72	151,790	77,510	172	178,974	81,856	68
West Virginia	241,969	81,167	384

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	1898.		Number of Miners for Each Life Lost.	1899.		Number of Miners for Each Life Lost.	1900.		Number of Miners for Each Life Lost.	1901.	
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.
Alabama	143,705		220	187,119	213,851	323	223,603	461,538	386	218,186	345
Colorado							189,508	87,234		108,698	145
Great Britain	224,991		467	278,982	39,254	440	267,595	41,168	419	263,716	311
Illinois	247,991	42,464		390,998	43,441	124	349,059	95,301	549		
Indiana				217,170	190,365	101	98,943	57,892	194	165,232	170
Iowa				256,656	91,042	637				267,806	439
Kansas	590,355		1,401	643,631	75,313	1,379	295,334	54,572	601		
Kentucky							437,863		603	426,074	448
Maryland	1,031,611	133,111	1,143				299,502	130,175	764	253,333	615
Missouri	315,356	105,117	821	227,986	138,752						
Nova Scotia				145,796	165,146						
Ohio	270,403	90,736	545	239,613	77,985	175	285,692	51,569	466	282,240	465
Pennsylvania	332,852	110,278		283,167	184,451	430	299,300	135,786	421	268,818	391
Tennessee	162,490	71,738	411	207,563	50,454	427				71,428	47,321
Utah	224,432	48,093			23,733		5,904	19,587	8	153,607	115,205
Washington	197,251	23,670	187	42,613	29,965	73	73,243	31,000	128	92,748	178
West Virginia	184,026	132,316	237	182,526	84,197	221	133,949	107,312	154	154,738	249

TABLE SHOWING FATAL ACCIDENTS DURING THE YEAR.

Date.	Name of Deceased.	Nativity.	Cause of Casualty.	Name of Mine.	County.
1900.					
November 26.....	John Vermulden.....	Germany.....	Killed by a fall of slate.....	Somers No. 1.....	Athens.
November 27.....	Orlando Watson.....	America.....	Killed by a fall of slate.....	Deerfield.....	Portage.
November 30.....	Reuben Bragdon.....	America.....	Killed by a fall of slate.....	Amerson.....	Jackson.
November 30.....	Richard Collins.....	England.....	Struck injured by a fall of rock. Died Dec. 7.....	Singer.....	Stark.
December 2.....	C. W. McDonald.....	Austria.....	Killed by falling down the shaft.....	Imperial.....	Guernsey.
December 9.....	Charles M. Grimm.....	America.....	Killed by being run over by a mine car.....	New Pittsburg No. 4.....	Hocking.
December 11.....	John Friend.....	America.....	Struck by a fall of draw slate. Died Dec. 25.....	Anna.....	Jackson.
December 11.....	Emanuel Pransky.....	Ger.-Amer.....	Killed by a fall of draw slate.....	Belmolder.....	Tuscarawas.
December 21.....	Louis H. Miller.....	America.....	Killed by mine car running down the slope.....	Wagoner.....	Medina.
December 21.....	Joseph H. Miner.....	America.....	Killed by mine car running down the slope.....	Wagoner.....	Medina.
December 25.....	Lewis Gladman.....	America.....	Killed by a loaded trip of mine cars.....	Walshounding.....	Guernsey.
1901.					
January 2.....	Wm. Swanger.....	America.....	Killed by a fall of soapstone.....	Acme.....	Tuscarawas.
January 11.....	Andrew Saller.....	Germany.....	Killed by a fall of coal.....	Slope.....	Columbiana.
January 18.....	Julius Hazelle.....	Belgium.....	Crushed by motor.....	Dillon No. 2.....	Jefferson.
January 24.....	George Barnes.....	America.....	Killed by a fall of slate. Died Feb. 3d.....	Central.....	Guernsey.
January 25.....	Daniel Hunt.....	America.....	Killed by an explosion of powder.....	Tom Corwin No. 1.....	Jackson.
February 1.....	Wm. Hyde.....	America.....	Killed by flying coal.....	Takdale.....	Athens.
February 6.....	James Remphrey.....	England.....	Killed by falling from the cage.....	Superior No. 7.....	Jackson.
February 7.....	James Reedy.....	America.....	Killed by mine cars.....	Grace.....	Jackson.
February 8.....	James W. Jones.....	Wales.....	Killed by being caught by the cage.....	Franklin No. 1.....	Coshocton.
February 9.....	Frank H. Davis.....	America.....	Killed by a fall of stone.....	Fillers.....	Portage.
February 11.....	Henry Barnes.....	America.....	Killed by a fall of slate.....	Black Diamond.....	Belmont.
February 9.....	James Hupp.....	America.....	Died from submersion after repairing machinery and starting out of mine.....	Sulphur Springs.....	Perry.
March 17.....	Frank C. Stowe.....	America.....	Killed by a fall of coal.....	New Castle.....	Tuscarawas.
March 19.....	Daniel Ferrell.....	America.....	Killed by a fall of coal.....	Buckeye.....	Meigs.
March 21.....	Harry Willis.....	America.....	Killed by a fall of clay.....	Greiners No. 1.....	Muskingum.
April 9.....	Christian Folt.....	Germany.....	Killed by undermining a standing shot.....	Muhart No. 1.....	Jackson.
April 24.....	John Eake.....	Germany.....	Killed by a fall of slate.....	No. 8.....	Perry.
April 24.....	Lafayette Poinsett.....	America.....	Killed by a premature explosion.....	Thompson Run.....	Tuscarawas.
May 3.....	Evan J. Lewis.....	America.....	Killed by a premature explosion.....	Muhart No. 2.....	Jackson.
May 3.....	George Bishop, Jr.....	America.....	Killed by a fall of slate.....	High Shaft.....	Jackson.
May 10.....	Thos. Harrington.....	America.....	Injured by mine car. Died June 19th.....	Cisco Shaft.....	Jefferson.
May 14.....	John Barnack.....	Hungary.....	Killed by a standing shot.....	Emma No. 2.....	Guernsey.
May 16.....	James R. Bailes.....	America.....	Killed by mine cage falling through the track.....	Emma No. 2.....	Jackson.
May 20.....	Daniel Mitchell.....	America.....			

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Date.	Name of Deceased.	Nativity.	Cause of Casualty.	Name of Mine.	County.
1901.					
June 17.....	Homor Drake.....	America.....	Killed by riding on a trip.....	No. 8.....	Perry.
June 24.....	Daniel Ables.....	America.....	Killed by mine cars.....	Central.....	Guernsey.
June 24.....	Thomas Butler.....	America.....	Killed by a fall of stone.....	Boggs.....	Belmont.
June 29.....	Orley F. Devore.....	America.....	Killed by a fall of slate.....	Imperial.....	Guernsey.
July 2.....	Wm. Senheiser.....	America.....	Killed by a fall of slate.....	McNabb.....	Columbiana.
July 12.....	James Anderson.....	Scotland.....	Killed by a fall of rock. Died July 16th.....	East Goshen No. 2.....	Tuscarawas.
July 16.....	Thomas Davidson.....	Scotland.....	Killed by a fall of slate.....	Irondale No. 3.....	Jefferson.
July 20.....	James Davis.....	Wales.....	Killed by a fall of slate.....	Central.....	Guernsey.
August 10.....	John Gulays.....	Hungary.....	Killed by a fall of stone.....	Boggs.....	Belmont.
August 16.....	Arthur Charles.....	America.....	Killed by a fall of slate.....	Lost Run.....	Hocking.
August 17.....	Hervey Phillips.....	America.....	Killed by a fall of rock.....	Hutson No. 5.....	Portage.
August 24.....	Red Sangler.....	America.....	Killed by a fall of slate.....	Malvern.....	Carroll.
August 24.....	Anthony Sangler.....	America.....	Killed by a fall of clay.....	Malvern.....	Carroll.
August 26.....	John Abuhl.....	Switzerland.....	Run over by mine cars.....	Thompson Run.....	Tuscarawas.
September 11.....	Henry Abram.....	America.....	Struck by a shot blowing through the rib.....	Tom Corwin No. 1.....	Tuscarawas.
September 17.....	Wm. Simmons.....	England.....	Struck by a fall of rock. Died Sept. 21st.....	East Goshen No. 1.....	Belmont.
September 18.....	David Thomas.....	England.....	Killed by being run over by a motor.....	Crescent No. 2.....	Belmont.
September 20.....	Ernest Davis.....	America.....	Killed by a fall of coal. Died Sept. 21.....	Young's shaft.....	Stark.
September 27.....	John Douglas.....	America.....	Burned by an explosion. Died Oct. 1st.....	Fullart No. 2.....	Jackson.
September 30.....	John Neal.....	America.....	Killed by a fall of slate.....	No. 20.....	Perry.
October 2.....	Wm. Finnan.....	America.....	Killed by a fall of slate.....	Somers No. 1.....	Athens.
October 5.....	Ed. Cobagen.....	America.....	Killed by a fall of slate.....	Walhounding.....	Hocking.
October 10.....	Mike Hamilton.....	America.....	Killed by a boiler explosion.....	New Pittsburg No. 1.....	Guernsey.
October 15.....	Alfred Boldin.....	England.....	Killed by a fall of roof.....	Massillon Mine Co. No. 2.....	Hocking.
October 21.....	Mike Jesmont.....	Poland.....	Killed by a fall of slate.....	Dillon No. 2.....	Stark.
October 21.....	Thomas Lane.....	America.....	Killed by a fall of slate.....	Thompson Run West.....	Jefferson.
November 6.....	Wm. Atkinson.....	America.....	Killed by a fall of slate.....	Proctor.....	Tuscarawas.
November 6.....	James Crawford.....	America.....	Killed by a fall of slate.....	Nicholson.....	Guernsey.
November 11.....	Monzo Young.....	America.....	Killed by a fall of slate.....	Hocking Valley.....	Athens.
November 11.....	Edward Simmon.....	America.....	Struck by an explosion of gas.....	Labelle.....	Jefferson.
November 11.....	Wm. Vandine.....	America.....	Struck by an explosion of gas.....	Labelle.....	Jefferson.
November 11.....	James Robertson.....	Scotland.....	Killed by an explosion of gas.....	Labelle.....	Jefferson.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1900.					
November 15.....	Lee Martin.....	Ankle injured.....	Fall of coal.....	Taggart.....	Belmont.
November 17.....	Jacob Fitch.....	Leg broken.....	Fall of slate.....	Cherry Valley No. 4.....	Columbiana.
November 20.....	Harvey Waller.....	Finger mashed.....	Mine car.....	Wade.....	Coshocton.
November 22.....	George Haines.....	Back broken.....	Fall of slate.....	Dillon No. 2.....	Jefferson.
November 23.....	John Chubb.....	Finger broken.....	Fall of slate.....	Keystone No. 1.....	Perry.
November 26.....	George W. Hubbard.....	Leg broken.....	Rope handle broke.....	Rock Run No. 3.....	Perry.
November 26.....	M. E. Wadsworth.....	Foot injured.....	Fall of coal.....	Rock Run No. 3.....	Ahens.
November 27.....	West Hicks.....	Leg injured.....	Mine car.....	New Pittsburgh No. 2.....	Hocking.
November 27.....	Thomas Leugart.....	Leg broken.....	Fall of coal and slate.....	Lost Run No. 1.....	Hocking.
November 27.....	Sam Allen.....	Leg broken.....	Knocked by loose.....	No. 10.....	Ahens.
December 1.....	Ed. Lawler.....	Neck and back injured.....	Piece of steel from shaft.....	McFadyen.....	Jefferson.
December 2.....	Charles Walker.....	Hand injured.....	Struck by a mine car.....	Daleton No. 2.....	Ahens.
December 2.....	John Gieser.....	Body injured.....	Fall of slate.....	Little Kate.....	Guernsey.
December 4.....	Alfred M. Neal.....	Leg broken.....	Fall of slate.....	Halbert.....	Ahens.
December 5.....	Wm. Jones.....	Foot injured.....	Fall of slate.....	Mingwood No. 3.....	Stark.
December 6.....	Orville Weible.....	Head and shoulders.....	Fall of slate.....	.....	.....
December 8.....	Robert Spurrman.....	Squeezed.....	Caught between mine car and rib.....	Lost Run.....	Hocking.
December 8.....	E. W. Hykes.....	Hand injured.....	Mine car jumped the track.....	Sand Run New.....	Hocking.
December 10.....	Ed. Brown.....	Foot mashed.....	Shot blowing through the rib.....	Midvale No. 2.....	Tuscarawas.
December 10.....	Chas. Carpenter.....	Back injured.....	Caught under a cage.....	Milton No. 3.....	Jackson.
December 10.....	H. P. Lefever.....	Injured by explosion.....	Squeezed between mine car and coal.....	Midvale No. 4.....	Tuscarawas.
December 10.....	John Moody.....	Face, eyes and body.....	Dynamite.....	Jobs No. 23.....	Ahens.
December 12.....	Frank Littleton.....	Burned.....	Explosion of dynamite.....	Jobs No. 23.....	Ahens.
December 12.....	Chas. Norman.....	Leg injured.....	Mine car.....	Morgan.....	Belmont.
December 12.....	Alvin D. Doud.....	Hand injured.....	Caught between break rod and post.....	Imperial.....	Guernsey.
December 12.....	Thomas D. Clements.....	Leg broken.....	Switching an empty mine car.....	Old Orchard.....	Guernsey.
December 13.....	Wm. D. Cooper.....	Hand injured.....	Caught between mine car and post.....	Block.....	Perry.
December 14.....	Peter Moses.....	Ankle and foot injured.....	Premature explosion.....	Harford.....	Guernsey.
December 15.....	Jane Clinton.....	Foot injured.....	Fall of soapstone.....	Flushing.....	Belmont.
December 15.....	Wm. Shuf.....	Ankle injured.....	Fall of slate.....	Dayton C. & T. Co.....	Jackson.
December 20.....	Ed. Kelley.....	Foot sprained.....	Caught between mine car and door.....	Superior No. 3.....	Jackson.
December 20.....	Peter Smith.....	Leg broken.....	Fall of slate.....	Wagoner.....	Medina.
December 21.....	Wm. Southachbach.....	Seriously injured.....	Mine car ran down slope.....	Tally Ho.....	Stark.
December 21.....	Matthew Arnold.....	Leg broken.....	Caught between mine cars.....	Rock City.....	Tuscarawas.
December 22.....	Ernest Walters.....	Hand broken.....	Caught between mine car and post.....	Miner No. 2.....	Jackson.
December 23.....	C. Kirkendall.....	Arm broken.....	Fall of coal.....	Mingwood No. 3.....	Stark.
December 24.....	John Ellis.....	Leg injured.....	Fall of slate.....	.....	.....

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR.—Continued.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
February 24, 1901.	George Hess.	Foot mashed.	Car jumping the track.	Black Diamond.	Belmont.
February 25.	George Higgins.	Back injured.	Fall of drowslate.	Keystone No. 1.	Perry.
February 25.	Joseph Pontie.	Leg broken.	Undermining a standing shot.	Midvale No. 2.	Tuscarawas.
February 26.	Wm. Woods.	Leg injured.	Fall of roof coal.	Tin Plate.	Belmont.
February 26.	John McGeary.	Foot broken.	Fall of stone.	Nail Mill.	Belmont.
February 28.	Chas. Smith.	Leg injured.	Fall of coal.	New Crescent.	Perry.
February 28.	Frank Allen.	Hip injured.	Premature explosion.	Cherry Valley.	Columbiana.
February 28.	Thomas Reeve.	Face cut and ankle sprained.	Fall of slate.	New Greenville.	Stark.
February 28.	Chas. Forbes.	Thumb cut off and hand mashed.	Fall of slate.	Wainwright No. 4.	Tuscarawas.
March 2.	As Donely.	Arm broken.	Caught between mine car and rib.	Crescent No. 2.	Belmont.
March 2.	Porter Swezey.	Foot injured.	Fall of stone.	Lost Run.	Hocking.
March 3.	L. Griffith.	Seriously injured.	Explosion of powder.	Lisbon.	Columbiana.
March 4.	George Larks.	Shoulder fractured.	Riding on lumber car.	Rends No. 3.	Perry.
March 5.	John Weeks.	Leg broken.	Fall of slate.	Imperial.	Guernsey.
March 7.	Edwin Abram.	Leg broken.	Falling under mine car.	X. X.	Perry.
March 9.	Wm. Iler.	Head and face injured.	Plying coal from shot.	Fluhart No. 2.	Jackson.
March 9.	Wm. Fickson.	Head seriously injured.	Premature explosion.	Clover Leaf.	Harrison.
March 10.	James Nelson.	Finger cut off.	Compling mine cars.	Cisco.	Guernsey.
March 12.	Ed. Stochum.	Seriously injured.	Fall of slate.	No. 21.	Perry.
March 13.	Ed. Farick.	Seriously injured.	Fall of slate.	Superior No. 2.	Jackson.
March 13.	Clarence Bankrock.	Toes cut off.	Run over by mine car.	Kings.	Guernsey.
March 14.	Llewellyn Jenkins.	Head cut and ribs broken.	Run over by mine car.	Hutson No. 2.	Portage.
March 15.	Fred Kinder.	Hips injured.	Fall of slate.	Star No. 4.	Jackson.
March 16.	Albert Symes.	Finger injured.	Fall of slate.	Lost Run.	Hocking.
March 16.	Nidney English.	Leg broken.	Caught between mine car and rib.	Central.	Guernsey.
March 18.	Daniel McGeary.	Leg broken.	Struck by loaded mine car.	Belmont No. 2.	Belmont.
March 19.	John McDonald.	Seriously injured.	Caught between mine car and rib.	No. 24.	Athens.
March 20.	Clarence Harris.	Both legs broken.	Caught from a mine car.	Rends No. 3.	Perry.
March 23.	John Williams.	Knee cap injured.	Shot blowing through the rib.	Minglewood No. 3.	Stark.
March 25.	Nicholas Gible.	Two ribs broken.	Fall of stone.	Brookfield.	Stark.
March 25.	Robert Gibbs.	Hip and leg injured.	Fall of coal.	Cisco.	Guernsey.
March 26.	John Capehart, Jr.	Back injured.	Falling from mine car.	Syracuse Shaft.	Meigs.
March 26.	Frank Helms.	Back injured.	Fall of soapstone.	Pittsburg.	Belmont.
March 30.	Frank Canter.	Seriously injured.	Run over by mine cars.	Consol No. 3.	Hocking.
March 30.	Wm. Matheney.	Foot mashed.	Run over by mine cars.	Cisco.	Guernsey.
April 1.	Wm. Harbaugh.	Foot crushed.	Caught between mine cars.	No. 21.	Perry.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
April 9, 1901.	George Brown.	Leg broken.	Fall of slate.	Belmont No. 2.	Belmont.
April 13.	John Stewart.	Arm broken.	Run over by mine cars.	Kings.	Guernsey.
April 18.	Emmet E. Gillian.	Back injured.	Fall of stone.	Black Diamond.	Belmont.
April 19.	Wm. Norris.	Internally injured.	Fall of coal and drawslate.	Tippecanoe.	Harrison.
April 19.	Peter Reinhardt.	Head cut and leg broken.			
April 20.	George Morgan.	Two toes mashed.	Fall of slate.	Congo No. 2.	Perry.
April 22.	Frank Steam.	Shoulder dislocated.	Fall of slate.	Old Orchard.	Guernsey.
April 30.	W. M. Bath.	Seriously burned.	Fell under mine car.	Jobs No. 3.	Hocking.
April 30.	Joe DeLong.	Knee sprained.	Gasoline.	Pittsburg.	Meigs.
April 30.	Earl Doney.	Three fingers injured.	Caught by mine car.	Cisco.	Guernsey.
May 2.	Angelo Boz.	Hips injured.	By a water box.	Morgan Run No. 3.	Coshocton.
May 4.	J. M. Warner.	Leg broken.	Fall of drawslate.	Houk.	Tuscarawas.
May 4.	Fred Swayback.	Hand injured.	Fall of slate.	Wellston No. 3.	Jackson.
May 6.	Frank Bryan.	Leg broken.	Caught between mine cars.	No. 16.	Athens.
May 7.	Ralph Welch.	Back injured.	Fall of coal.	Consol No. 3.	Hocking.
May 8.	T. Dal. Cortiva.	Ankle injured.	Fall of slate.	Trail Run.	Guernsey.
May 9.	John Forest.	Shoulder injured.	Fall of coal.	Imperial.	Guernsey.
May 13.	James Selby.	Hips and chest injured.	Squeezed between mine car and roof.	Woodland.	Sark.
May 13.	Chas. Caldwell.	Finger broken.	Fell from mine car.	Hartford.	Guernsey.
May 14.	John Canade.	Back injured.	Fall of drawslate.	Rends No. 4.	Athens.
May 15.	Ethel Bartlow.	Arm broken.	Fall of coal.	Luhrig No. 2.	Athens.
May 16.	Jacob Reine.	Leg broken.	Fall of drawslate.	Broadwell.	Belmont.
May 20.	James Lowry.	Hand and chest injured.	Fall of coal.	Gaylord.	Belmont.
May 20.	Frank Molock.	Leg fractured.	Fall of soapstone.	Dillon No. 2.	Perry.
May 21.	Harry Salathiel.	Hip injured.	Fall of coal.	Old Crescent.	Jefferson.
May 23.	Wm. Corkery.	Fingers cut off.	Fall of slate.	Long Run.	Jefferson.
May 27.	John Leonard.	Foot mashed.	Caught in chain of mining machine.	Central.	Guernsey.
May 28.	William Rain.	Leg broken.	Fall of coal.	Sand Run No. 1.	Hocking.
June 1.	Levin Mickell.	Leg broken.	Struck by a truck.	Warwick No. 1.	Sark.
June 3.	E. J. Moore.	Ankle broken.	Struck by a tail rope.	Brush Fork No. 2.	Hocking.
June 6.	Edward Prall.	Leg injured.	Struck by haulage rope.	Beil Run.	Athens.
June 9.	Samuel Griffith.	Hips injured.	Fall of coal.	Sand Run.	Hocking.
June 11.	Barney Miller.	Leg broken.	Fall of slate.	Gaylord.	Belmont.
June 12.	O. Brown.	Leg broken.	Fall of rock.	No. 16.	Athens.
June 14.	Gate Willis.	Leg broken.	Fall of slate.	Superior No. 4.	Belmont.
June 14.	Wm. Allen.	Hips and leg injured.	Fall of coal.	Fluhart No. 1.	Jackson.
June 15.	Ed in Mazack.	Hips and leg injured.	Caught between mine car and roof.	East.	Medina.
June 15.	Frank Shabott.	Head injured.	Fall of soapstone.	Black Top.	Guernsey.
June 16.	Les. Hooker.	Foot injured.	Fall of slate.	Nail Mill.	Belmont.
June 19.	James Dewaine.	Seriously injured.	Fell from a trip.	Long Run.	Jefferson.
June 23.				Superior No. 7.	Jackson.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR.—Continued.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.					
June 23.	Lewis Gandy.	Hand injured.	Fall of drawslate.	Daleton No. 2.	Athens.
June 24.	Wesley Harris.	Knee injured.	Fall of sharp machine bit.	Sand Run.	Hocking.
June 24.	Bert Davis.	Foot cut.	Fall of slate.	Imperial.	Guernsey.
June 27.	Joseph Penman.	Foot injured and cut off.	Mining machine.	Longo No. 1.	Perry.
June 27.	David H. Jones.	Head and ankle injured.	Fall of slate.	Larford.	Guernsey.
July 2.	Frank Curtiss.	Back and hips injured.	Fall of slate.	Ideal.	Guernsey.
July 3.	Karl Christian.	Finger mashed.	Caught between mine car and roof.	New Pittsburgh No. 4.	Athens.
July 3.	Wm. Brooks.	Hand injured.	Fall of coal down shaft.	Daleton No. 2.	Meigs.
July 3.	John F.	Seriously injured.	Fall of drawslate.	Rockville.	Belmont.
July 3.	Anton Zick.	Leg injured.	Fall of slate.	Crescent No. 2.	Jefferson.
July 4.	Peter Koschick.	Seriously injured.	Fall of slate.	Conner.	Athens.
July 6.	Edwain Kidd.	Leg broken.	Fall of slate.	No. 20.	Athens.
July 6.	William Perry.	Foot injured.	Fall of slate.	Tom Corwin No. 1.	Jackson.
July 12.	John Clark.	Foot injured.	Caught in mining machine.	Pekin.	Athens.
July 12.	Chas. T. Newman.	Thumb cut off.	Fall of coal.	Lost Run No. 4.	Hocking.
July 13.	Chas. Wargo.	Leg injured.	Fall of soapstone.	Long Run.	Jefferson.
July 14.	Elmer Bagley.	Foot run over.	Mine car.	Wainwright No. 4.	Tuscarawas.
July 16.	Calvin Dixon.	Leg injured.	Caught between mine cars.	New Crescent.	Perry.
July 17.	W. A. Quick.	Serious injury to face.	Struck by a mule.	Tom Corwin No. 1.	Jackson.
July 27.	Albert Michels.	Chest and back sprained.	Fall of drawslate.	Keystone No. 1.	Perry.
July 27.	James Wetters.	Hips and back injured.	Fall of coal.	Keystone No. 1.	Perry.
July 31.	John McPeak.	Knee injured.	Mining machine.	Little Kate.	Guernsey.
August 1.	George Moore.	Breast and back injured.	Fall of roof.	Cisco.	Crescent No. 2.
August 1.	John Chuskey.	Both legs broken.	Fall of stone.	Glen Run No. 1.	Belmont.
August 1.	Chas. Warner.	Hips injured.	Caught between motor car and post.	Long Run.	Jefferson.
August 5.	John Tipton.	Back injured.	Fall of coal.	Pine Hill.	Columbiana.
August 12.	Simon Dickens.	Two ribs broken.	Fall of slate.	Jones No. 2.	Jackson.
August 13.	Frank Clemens.	Leg broken.	Fall of coal and slate.	Kelley.	Jefferson.
August 16.	Frank Davis.	Seriously injured.	Cable of mine car breaking.	Ohio & W. Va.	Jefferson.
August 17.	John Mathews.	Knee sprained.	Mule fell on him.	Woodland.	Belmont.
August 17.	John Brown.	Arm and neck burned.	Gasoline explosion.	Empire No. 3.	Stark.
August 21.	Adolph Karr.	Arm crushed.	Fall of soapstone.	Huffs Run.	Belmont.
August 21.	Andrew Arnott.	Arm broken.	Fall of coal.	Shaft No. 4.	Tuscarawas.
August 22.	Daniel O'Donald.	Back injured.	Fall of slate.	Milton No. 1.	Stark.
August 22.		Leg broken.	Fall of rock.	Milton No. 2.	Jackson.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.					
August 31.....	John Stewart.....	Leg broken.....	Run over by mine car.....	Calumet.....	Jefferson.
September 4.....	Ed Lewis.....	Leg fractured.....	Mining car jumped the track.....	New Shaft.....	Columbiana.
September 4.....	Chas. Beyer.....	Leg mashed.....	Caught between mine car and mining machine.....	Kings.....	Guernsey.
September 6.....	Richard Hick.....	Back strained.....	Premature explosion.....	No. 3 or Half Moon.....	Athens.
September 6.....	Oedrian Tipton.....	Head, feet and ankles injured.....	Premature explosion.....	Kelley.....	Lawrence.
September 9.....	George Dunlap.....	Side and shoulder bruised.....	Fall of roof.....	Cisco.....	Guernsey.
September 10.....	Wm. Salmons.....	Leg broken.....	Caught between mining machine and post.....	Crescent No. 2.....	Belmont.
September 10.....	Frank Fehrbach.....	Four ribs fractured.....	Fall of slate.....	Singer.....	Stark.
September 11.....	Ignatius McHugh.....	Knee injured.....	Fall of coal.....	Tunnel No. 3.....	Tuscarawas.
September 12.....	J. D. McLaughlin.....	Knee injured.....	Caught between bumper and mine car.....	Cisco.....	Guernsey.
September 16.....	James Evans.....	Shoulder and legs injured.....	Fall of coal.....	Jobs No. 2.....	Hocking.
September 17.....	George Benedict.....	Finger broken and two mashed.....	Throwing latch with his hand.....	Kings.....	Guernsey.
September 18.....	George Sass.....	Leg broken.....	Fall of stone.....	Maple Hill.....	Belmont.
September 18.....	D. W. Niles.....	Wrist injured.....	Fall of slate.....	Imperial.....	Guernsey.
September 18.....	George Craig.....	Seriously injured.....	Caught between mine car and rib.....	Black No. 2.....	Jefferson.
September 19.....	Joe Hines.....	Finger cut off.....	Fall of slate.....	Black Top.....	Guernsey.
September 20.....	Frank Williams.....	Ankle broken.....	Run over by loaded mine cars.....	Milton No. 3.....	Jackson.
September 20.....	A. H. Dyer.....	Leg broken.....	Caught between mine cars.....	Fluhart No. 2.....	Guernsey.
September 21.....	Thos. Caldwell.....	Head and neck cut.....	Fall of slate.....	Imperial.....	Jefferson.
September 21.....	Hecker Lane.....	Wrist dislocated.....	Fall of stone.....	Billon No. 2.....	Belmont.
September 21.....	Allen Freewax.....	Leg broken.....	Fall of stone.....	Tim Plate.....	Jefferson.
September 28.....	Geber Fardon.....	Leg broken.....	Fall of roof coal.....	Long Run.....	Belmont.
September 30.....	John Beal.....	Collar bone and hip broken.....	Fall of slate.....	No. 20.....	Perry.
October.....	John Lewis.....	Back and leg bruised.....	Fall of slate.....	Silver Run.....	Meigs.
October 1.....	Ed. Lewis.....	Leg fractured.....	Mine car jumped the track.....	New Shaft.....	Columbiana.
October 1.....	John Secoria.....	Three ribs broken.....	Fall of roof.....	Crescent No. 2.....	Belmont.
October 3.....	Chas. Robinson.....	Back injured and leg broken.....	Fall of slate.....	Buckeye.....	Jackson.
October 3.....	Thos. Clarke, Jr.....	Leg broken.....	Fall of slate.....	Peterson.....	Columbiana.
October 4.....	Edward Patterson.....	Seriously injured.....	Train running down the incline.....	Green Run.....	Jefferson.
October 7.....	Ferry Hesse.....	Finger mashed.....	Fall of stone.....	Black Diamond.....	Belmont.
October 9.....	Joseph Polski.....	Ankle fractured.....	Fall of slate.....	Crescent No. 3.....	Belmont.
October 10.....	James Morgan.....	Wrist injured.....	Caught between mine cars.....	East Goshen No. 2.....	Tuscarawas.
October 10.....	Thomas Slayman.....	Hand injured.....	Run over by mine car.....	Kings.....	Guernsey.
October 21.....	W. Bond.....	Leg injured.....	Caught between mine car and brattice.....	Superior No. 6.....	Guernsey.
October 21.....	Wm. Nicholas.....	Arm broken.....	Caught between mine car and roof.....	Superior No. 6.....	Jackson.
October 22.....	Edward Elsurick.....	Eye injured.....	Flying steel from coupling pin.....	Cisco.....	Guernsey.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR.—Concluded.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
October 21.....	Robert Daley.....	Eye injured.....	Struck by piece of coal.....	Deerfield No. 1.....	Portage.
October 22.....	Wm. Jones.....	Seriously injured.....	Fall of slate.....	Walhounding.....	Guernsey.
October 23.....	Ralph Norman.....	Seriously injured.....	Fall of slate.....	Walhounding.....	Guernsey.
October 24.....	Reuben Carr.....	Hand injured.....	Caught between mine car and post.....	Wheeling Creek No. 1.....	Belmont.
October 25.....	Benjamin Allen.....	Seriously injured.....	Fall of slate.....	Wainwright.....	Jefferson.
October 26.....	Wm. Thompson.....	Foot injured.....	Fall of stone.....	Walnut Hill.....	Jefferson.
October 27.....	Peter Dorson.....	Leg broken.....	Fall of rock.....	Singer or No. 1.....	Stark.
October 28.....	John Ducey.....	Leg broken and face and arms burned.....	Explosion of powder.....	Billman.....	Wayne.
October 29.....	J. W. Richards.....	Leg broken.....	Fall of slate.....	Congo No. 1.....	Perry.
October 30.....	Frank Shannon.....	Foot run over.....	Motor.....	No. 21.....	Perry.
October 31.....	Francis Donnelly.....	Leg and arm cut.....	Fall of coal.....	Old Orchard.....	Guernsey.
October 32.....	Willis Wise.....	Foot injured.....	Caught between mule and mine car.....	Morgan Run No. 3.....	Coshocton.
October 33.....	John Elgelham.....	Finger injured.....	Run over by mine car.....	Walnut Hill.....	Jefferson.
October 34.....	James Fisk.....	Leg broken.....	Fall of roof.....	Consol No. 3.....	Hocking.
October 35.....	Chas. Chambers.....	Two ribs and collar bone broken.....	Fall of roof.....	Doanville No. 1.....	Athens.
October 36.....	Wm. Hutson.....	Leg broken.....	Caught between mine car and post.....	Sugar Creek.....	Tuscarawas.
October 37.....	Dwight Tutton.....	Two fingers squeezed.....	Causing mine cars.....	Massillon C. & M. No. 2.....	Stark.
October 38.....	W. Greenberg.....	Hand injured.....	Caught between mine car and rib.....	Stark.....	Stark.
November 1.....	Wm. Remage.....	Leg broken.....	Caught between loaded mine cars.....	Klondike.....	Guernsey.
November 2.....	Harry Ablett.....	Finger mashed.....	Caught between mine cars.....	New Crescent.....	Perry.
November 3.....	Wm. McDaniel.....	Seriously injured.....	Explosion of gas.....	Lectonia.....	Columbiana.
November 4.....	Wm. McDaniel.....	Seriously injured.....	Fall of clay.....	New Castle.....	Lawrence.
November 5.....	Thos. Frazer.....	Ankle fractured.....	Caught between motor and rib.....	Greendale No. 2b.....	Athens.
November 6.....	Richard Hotchkiss.....	Seriously injured.....	Fall from loaded trip.....	Kelley.....	Jefferson.
November 7.....	Richard Hotchkiss.....	Arm broken.....	Fall of coal.....	Glenwood.....	Noble.
November 8.....	F. L. Burligan.....	Hips injured.....	Caught between mine cars.....	Keystone No. 3.....	Perry.
November 9.....	Cal Ross.....	Hips crushed.....	Premature explosion.....	Superior No. 6.....	Jackson.
November 10.....	Dan Kitter.....	Leg broken.....	Caught between coal and gob.....	No. 6.....	Stark.
November 11.....	August Aulthouf.....	Leg and back injured.....	Struck by a piece of coal.....	Keystone No. 1.....	Perry.
November 12.....	George Bradshaw.....	Eye injured.....	Caught by mine car.....	Luhig No. 1.....	Athens.
November 13.....	Chas. Sharpe.....	Foot broken.....			
November 14.....	Freeman (reel).....	Back and shoulder injured.....			
November 15.....	Frank Kosowski.....	Arm crushed.....	Fall of rock.....	American Sheet Steel.....	Tuscarawas.
November 16.....	Amrose Lynch.....	Leg broken.....	Fall of coal.....	Dillon No. 2.....	Jefferson.
November 17.....	Lawrence Ford.....	Four ribs broken.....	Fall of stone.....	Glen.....	Belmont.
November 18.....	Wm. Airett.....	Leg broken.....	Fall of slate.....	North Massillon No. 2.....	Stark.
November 19.....	Arthur Johns.....	Foot injured.....	Caught between mine cars.....	West Pittsburgh.....	Jefferson.

					County.
1900.					
November 16.....	Chas. Dixon.....	Leg injured.....	Mine car jumped the track.....	Somerdale No. 2.....	Tuscarawas.
November 19.....	James Warrington.....	Leg injured.....	Mine car jumped the track.....	Somerdale No. 2.....	Tuscarawas.
November 19.....	Leonard Jeffers.....	Slightly injured.....	Kicked by a mule.....	Morgan.....	Belmont.
November 19.....	John Baird.....	Slightly injured.....	Mine car.....	Luhat No. 3.....	Jackson.
November 20.....	Frank Newman.....	Slightly injured.....	Premature explosion.....	Superior No. 2.....	Tuscarawas.
November 22.....	Otello Bertoline.....	Ankle and back injured.....	Failure of stone.....	Houk.....	Hocking.
November 23.....	Walter Harvey.....	Heel mashed.....	Caught between mine cars.....	Lost Run No. 4.....	Tuscarawas.
November 29.....	Wm. Shaw.....	Finger mashed.....	Failure of coal.....	Trenton.....	Tuscarawas.
December 6.....	Gwen Baker.....	Foot injured.....	Failure of slate.....	Phoenix No. 2.....	Athens.
December 10.....	Chas. Keirns.....	Foot injured.....	Explosion of dynamite.....	Jobs No. 2.....	Athens.
December 11.....	Sam Fair.....	Little finger cut off.....	Caught between link of car on tail chain.....	Avstone No. 1.....	Perry.
December 12.....	Newlin Hurch.....	Ankle injured.....	Failure of soapstone.....	Wheeling Creek.....	Belmont.
December 15.....	David Gossman.....	Leg bruised.....	Failure of coal.....	Kelly.....	Lawrence.
December 17.....	Gus Stoner.....	Toe broken.....	Mine car jumped the track.....	Tassillon-Peacock.....	Tuscarawas.
December 17.....	Frank Muscomier.....	Toe injured.....	Failure of coal.....	Voodland.....	Stark.
December 21.....	C. C. Cook.....	Slightly injured.....	Caught by the cage.....	McKinley.....	Mahoning.
December 27.....	Frank Huffman.....	Hand injured.....	Failure of slate.....	Fairfield.....	Columbiana.
December 29.....	Wm. Whittacre.....	Leg injured.....	Failure of drawslate.....	Lisbon.....	Columbiana.
1901.					
January 2.....	Wm. Real.....	Hand injured.....	Failure of slate.....	New Crescent.....	Perry.
January 2.....	Herbert Swanger.....	Face bruised.....	Failure of soapstone.....	Acme.....	Tuscarawas.
January 2.....	Alfred McClelland.....	Face cut.....	Failure of slate.....	Keystone No. 1.....	Perry.
January 4.....	Dan Hunt.....	Foot injured.....	Mine car.....	Rends No. 3.....	Perry.
January 7.....	G. Hutchinson.....	Leg injured.....	Failure of slate.....	Superior No. 4.....	Jackson.
January 8.....	Thos. Wycoff.....	Ankle injured.....	Failure of slate.....	Pleasant Valley.....	Stark.
January 10.....	Joe Petro.....	Ankle injured.....	Failure of coal.....	Congo No. 2.....	Perry.
January 13.....	Geo. Carpenter.....	Finger injured.....	Caught between mine car and post.....	Morgan Run No. 3.....	Coshocton.
January 15.....	Wm. McPheters.....	Foot injured.....	Mining machine jumped the track.....	Milton No. 3.....	Jackson.
January 15.....	Wm. Greene.....	Hand injured.....	Caught between mine car and post.....	Wheeling Creek.....	Belmont.
January 24.....	Miles Lee.....	Foot injured.....	Caught between mine car and post.....	Wilson.....	Jefferson.
January 25.....	S. E. Davies.....	Hand injured.....	Caught between mine car and sprag.....	Daleton No. 2.....	Athens.
January 28.....	H. McKinley.....	Foot injured.....	Mining machine fell on it.....	Rends No. 4.....	Athens.
January 28.....	Joseph Murtive.....	Forehead cut.....	Falling post.....	Wheeling Creek.....	Belmont.
January 29.....	Wm. Grimson.....	Hip bruised and leg cut.....	Failure of slate and coal.....	Daleton.....	Athens.
February 1.....	Harry H. Spencer.....	Face injured.....	Kicked by a mule.....	Star No. 4.....	Jackson.
February 4.....	Grant Kaderly.....	Arm injured.....	Mine car wheel.....	East Goshen No. 2.....	Tuscarawas.
February 4.....	Harvey Rambo.....	Leg injured.....	Failure of drawslate.....	New Crescent.....	Perry.
February 7.....	Walter Carr.....	Head injured.....	Failure of coal.....	Woodland.....	Stark.
February 8.....	James McCramm.....	Hands and face burned.....	Explosion of fire damp.....	Young's shaft.....	Stark.
February 8.....	John Moore.....	Leg injured.....	Mine car jumped the track.....	Rends No. 3.....	Perry.
February 16.....	Michael Keller.....	Slightly injured.....	Failure of drawslate.....	Billman.....	Wayne.

TABLE SHOWING MINOR ACCIDENTS DURING THE YEAR.—Continued.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.					
February 18.....	John S. Handrick.	Finger cut off.	Mine car	Cisco	Guernsey.
February 18.....	Wm. Cousins.	Ankle sprained.	Mine car jumped the track.	Rends No. 3	Perry.
February 20.....	Harvey Spencer.	Knee injured.	Platform gave way	Antiquity	Meigs.
February 20.....	Thos. Stohart.	Knee injured.	Platform gave way	Antiquity	Meigs.
February 20.....	Jacob Neighbor.	Elbow and shoulder injured	Platform gave way	Antiquity	Meigs.
February 20.....	U. C. Alexander.	Slightly injured.	Platform gave way	Antiquity	Meigs.
February 20.....	Mary Sweeney.	Back and limbs injured.	Falling under a loaded mine car.	Daleton No. 1	Athens.
February 20.....	Larry Noon.	Foot mashed.	Run over by mine cars.	Daleton No. 1	Athens.
February 22.....	George Humel.	Foot injured.	Caught by a mine car.	Somerdale No. 2	Tuscarawas.
February 25.....	Lamp Wade.	Foot injured.	Coupling mine cars.	Pittsburg	Belmont.
February 26.....	George Selvy.	Hand injured.	Mine cars	Trail Run	Guernsey.
February 28.....	Thos. Jones.	Hand injured.	Caught between mine door and car.	Minglewood No. 3	Stark.
March 1.....	George Wilson.	Leg injured.	Fall of slate.	Lost Run	Hocking.
March 3.....	Harry Johnson.	Foot injured.	Caught between mine cars.	New Shaft	Columbiana.
March 5.....	Emmer Garner.	Foot injured.	Mine cars	Walnut Hill	Jefferson.
March 8.....	F. A. Samers.	Foot injured.	Fall of stone	Walnut Hill	Jefferson.
March 12.....	Samuel Lee.	Leg injured.	Fall of stone	Hillman	Wayne.
March 15.....	John L. Sullivan.	Hip and side injured.	Blast blowing door down	Hutton No. 6	Portage.
March 15.....	Wm. Freely.	Leg and foot injured.	Fall of slate	Superior No. 5	Jackson.
March 20.....	John Myers.	Back injured.	Fall of roof.	Morgan Run No. 3	Coshocton.
March 21.....	Bert Simmers.	Foot injured.	Mine car	Newport	Tuscarawas.
March 21.....	Ernest Bimler.	Slightly injured.	Fire from powder shot	Massillon-Peacock	Tuscarawas.
March 21.....	Geo. Robertson.	Slightly injured.	Fire from powder shot	Massillon-Peacock	Tuscarawas.
March 21.....	Wm. Chambers.	Slightly injured.	Shot blew through the rib.	Massillon-Peacock	Tuscarawas.
March 23.....	Ruse Morrow.	Slightly injured.	Fall of rock.	Minglewood No. 3	Stark.
March 25.....	John Hennan.	Toes mashed.	Mine cars jumped the track.	Silver Run	Meigs.
April 2.....	Arthur Dudley.	Leg squeezed.	Mine cars jumped the track.	Glenwood	Noble.
April 3.....	John Sellers.	Back injured.	Fall of slate.	Syracuse Shaft	Meigs.
April 4.....	Mat Barber.	Foot injured.	Machine truck	Forsythe	Guernsey.
April 9.....	Chas. Buecy.	Foot injured.	Fall of stone	Kelly	Guernsey.
April 10.....	Andy Clerky.	Face and head cut.	Caught under a cage.	Black Top	Guernsey.
April 11.....	Geo. Wakefield, Jr.	Hand injured.	Fall of coal.	Phoenix No. 2	Athens.
April 11.....	Geo. Carpenter.	Leg injured.	Mine cars	Morgan Run No. 3	Coshocton.
April 14.....	John Wheeler.	Slightly injured and head bruised.	Repairing pump	New Shaft	Columbiana.
April 15.....	Lewis Osgar.	Head injured and head bruised.	Fall of coal.	Rings	Guernsey.
April 16.....	U. Mashe.	Slightly injured.	Caught between mine cars.	New Shaft	Columbiana.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.					
May 21.....	Wm. F. Gunther.....	Face and arm injured.....	Explosion of gasoline.....	Charter Oak.....	Meigs.
May 21.....	Smith Lafferty.....	Leg injured.....	Falling from a flat.....	Conner No. 1.....	Jefferson.
May 20.....	Sabastian Fontana.....	Arm bruised.....	Fall of slate.....	Glen.....	Belmont.
June 6.....	Lewis Mulien.....	Arm bruised.....	Kicked by a mule.....	Foraythe.....	Guernsey.
June 10.....	C. Hable.....	Hip bruised.....	Mine car jumping the track.....	Captina.....	Belmont.
June 17.....	Ben Connel.....	Face cut.....	Struck by door.....	Crescent No. 2.....	Belmont.
June 18.....	John Hennis.....	Toes injured.....	Run over by loaded car.....	Kelly No. 2.....	Jefferson.
June 18.....	John Welsh.....	Foot injured.....	Struck by falling hand jack.....	Kelly No. 2.....	Jefferson.
June 19.....	Harvey Waldron.....	Finger injured.....	Fall of slate.....	Long Run.....	Jefferson.
June 20.....	James Ten.....	Leg injured.....	Fall of roof.....	Lectonia.....	Columbiana.
June 20.....	Wm. Lippeman.....	Foot injured.....	Wire spike.....	Ladian Run.....	Stark.
June 21.....	F. R. Taylor.....	Back and ankle injured.....	Fall of slate.....	Keystone No. 2.....	Perry.
July 6.....	Albert Moore.....	Slightly injured.....	Fall of slate.....	Fuhart No. 3.....	Jefferson.
July 9.....	Eve Price.....	Face, arms and legs injured.....	Premature explosion.....	Wainwright.....	Jackson.
July 9.....	John Manning.....	Head and shoulder injured.....			
July 11.....	Grove.....	Head injured.....	Fall of slate.....	Lost Run No. 4.....	Hocking.
July 12.....	Andy Patek.....	Head cut.....	Fall of coal.....	Shawnee Valley.....	Perry.
July 13.....	Jacob Johns.....	Leg injured.....	Fall of stone.....	Long Run.....	Jefferson.
July 13.....	John McInnis.....	Arm injured.....	Caught between mine cars.....	Minglewood No. 1.....	Stark.
July 17.....	Benjamin Conel.....	Face cut.....	Struck by mine door.....	Minglewood No. 1.....	Stark.
July 19.....	Chas. Fitzgerald.....	Slightly injured.....	Struck between mine cars and post.....	Crescent No. 2.....	Belmont.
July 22.....	John Kamardis.....	Foot injured.....	Struck by motor.....	Long Run.....	Jefferson.
July 23.....	Archibald Dalrymple.....	Foot bruised.....	Fall of bone coal.....	Long Run No. 4.....	Hocking.
July 25.....	D. Reese.....	Hip injured.....	Caught between truck and trap door.....	Imperial.....	Guernsey.
July 31.....	Sherman Shaffer.....	Hips injured.....	Explosion from mine car.....	Harford.....	Guernsey.
August 2.....	Wm. Marling.....	Eyes injured.....	Explosion of powder.....	Nail Mill.....	Belmont.
August 7.....	George Wolfe.....	Foot injured.....	Falling between mine cars.....	Davis No. 6.....	Carroll.
August 7.....	Wm. Penman.....	Neck injured.....	Fall of slate.....	Superior No. 4.....	Columbiana.
August 10.....	Melvin Jenkins.....	Slightly injured.....	Fall of coal and slate.....	Superior No. 3.....	Jackson.
August 10.....	Wm. Fenell.....	Back injured.....	Fall of slate.....	Wade.....	Coalton.
August 10.....	Henry Crawford.....	Face cut.....	Fall of slate.....	Kelley.....	Jefferson.
August 13.....	Wm. Hennis.....	Slightly injured.....	Cable broke, mine car ran through the tippie.....	Kelley.....	Meigs.
August 13.....	Laurey Heatherington.....	Slightly injured.....	Cable broke, mine car ran through the tippie.....	Silver Run.....	Jefferson.
August 15.....	D. Workman.....	Finger mangled.....	Tamping a hole.....	Kelley No. 2.....	Meigs.
August 15.....	Leslie Ennis.....	Foot injured.....	Fall of stone.....	Shaft No. 1.....	Jefferson.
August 18.....	Isaac Sandwith.....	Face and hand injured.....	Struck by coal from a shot.....	Phoenix No. 2.....	Stark.
August 21.....	Jacob Martin.....	Head injured.....	Caught between mine car and rib.....	Wainwright.....	Jackson.
August 25.....	Wm. Nash.....	Slightly injured.....	Kicked by a horse.....	Phoenix No. 2.....	Athens.
August 28.....	Nat. Canahan.....	Hand injured.....	Caught by mine car.....	Davis No. 6.....	Carroll.
August 31.....	E. Talbert.....	Ear injured.....	Fall of slate.....	Superior No. 4.....	Jackson.
September 2.....					

TABLE SHOWING MINOR ACCIDENTS DURING THE YEAR.—Continued.

Date.	Name.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.					
September 3.....	S. Stovle.....	Foot injured.....	Run over by mine cars.....	No. 21.....	Perry.
September 3.....	J. C. Milliken.....	Shoulders crushed.....	Fall of slate.....	Newport.....	Tuscarawas.
September 4.....	Frank David.....	Foot mashed.....	Mine car jumped the track.....	Kings.....	Guernsey.
September 4.....	Walter Davidson.....	Head injured.....	Fell from a railway car.....	Silver Run.....	Meigs.
September 8.....	Harry Cochran.....	Slightly injured.....	Slipped on a stairway.....	Kings.....	Guernsey.
September 8.....	Sam McCune.....	Slightly injured.....	Kicked by a mule.....	Kings.....	Guernsey.
September 13.....	Charles Smith.....	Foot injured.....	Fall of slate.....	Keystone No. 3.....	Perry.
September 15.....	Wm. Schwab.....	Back injured.....	Fall of rock.....	Luck Horn.....	Tuscarawas.
September 21.....	John Valentine.....	Foot injured.....	Mining machine.....	Old Orchard.....	Guernsey.
September 21.....	Jacob Wolf.....	Finger injured.....	Caught under a car wheel.....	West Pittsburg.....	Stark.
September 26.....	Fred Carter.....	Slightly injured.....	Explosion of gas.....	Price.....	Jefferson.
September 26.....	Wm. Mapes.....	Back sprained.....	Dumping a car of slate.....	Black Diamond.....	Jackson.
September 28.....	Wm. Doyle.....	Hip injured.....	Fall of soapstone.....	Brilliant.....	Belmont.
September 28.....	Joseph Sanderson.....	Nose injured.....	Fall of timber.....	Long Run.....	Jefferson.
October 5.....	Orville Arnold.....	Foot injured.....	Caught between mine car and rib.....	Woodland.....	Jefferson.
October 7.....	Thomas Thomas.....	Leg injured.....	Caught between mine cars.....	Woodland.....	Stark.
October 8.....	Carl Spencer.....	Ankle sprained and foot injured.....	Caught between sprag and car.....	No. 16.....	Athens.
October 10.....	John Evans.....	Side injured.....	Fall of slate.....	Congo No. 1.....	Perry.
October 10.....	George Ogilethorp.....	Collar bone injured.....	Mine cars.....	Young's Shaft.....	Stark.
October 11.....	Wm. Ogilethorp.....	Foot injured.....	Mine car jumped the track.....	Young's Shaft.....	Stark.
October 12.....	Henry Jakes.....	Foot injured.....	Caught by cage and shaft bottom.....	East Greenville.....	Stark.
October 12.....	Alex Miller.....	Finger bruised.....	Caught between mine cars.....	Singer.....	Stark.
October 13.....	George Brown.....	Slightly injured.....	Fall of slate.....	Walhounding.....	Guernsey.
October 15.....	Edward Richards.....	Finger cut off.....	Cleaning coal off track when mule started.....	Emma No. 2.....	Jackson.
October 17.....	Chas. Williams.....	Wrist sprained.....	Lifting mine car.....	Imperial.....	Guernsey.
October 21.....	George Stern.....	Foot bruised.....	Fall of coal.....	Singer or No. 1.....	Stark.
October 21.....	Mike Zanzura.....	Head cut and back injured.....	Fall of coal.....	Singer or No. 1.....	Stark.
October 21.....	Jacob Marshall.....	Hand injured.....	Caught by a machine hit.....	Cisco.....	Guernsey.
October 24.....	Ambrose Walton.....	Side injured.....	Premature explosion.....	Milton No. 3.....	Jackson.
October 24.....	Steve Wheatley.....	Foot injured.....	Fall of slate.....	Superior No. 3.....	Columbiana.
October 24.....	John T. Vice.....	Head cut.....	Fall of slate.....	New Shaft.....	Columbiana.
October 26.....	James Miner.....	Hip bruised.....	Caught between mine cars.....	Pittsburg No. 2.....	Hocking.
October 26.....	R. D. Jones.....	Head cut.....	Caught between mine cars.....	Granger.....	Muskingum.
October 28.....	Joe Fuit.....	Slightly injured.....	Fall of coal.....	Northern.....	Jackson.
October 28.....	Olive Briar.....	Slightly injured.....	Rope haulage.....	Long Run.....	Jefferson.
October 28.....	Benny Devera.....	Slightly injured.....	Caught between mine car and entry.....	New Shaft.....	Columbiana.
October 28.....				Superior No. 3.....	Jackson.
October 28.....				Ohio and W. Va.....	Belmont.

1901.					County.
November 6.....	Martin L. Sherman.....	Hand and leg injured..	Fall of coal.....	Luhrig No. 1.....	Athens.
November 6.....	W. P. Johnson.....	Foot injured.....	Fall of stone.....	Kelley.....	Jefferson.
November 8.....	Wm. Cunker, Jr.....	Eye injured.....	Kicked by a mule.....	Superior No. 6.....	Jackson.
November 9.....	George Gale.....	Foot injured.....	Fall of drawslate.....	Hutson No. 4.....	Portage.
November 12.....	Charles Coss.....	Foot injured.....	Caught by a wagon.....	Rush Run.....	Jefferson.
November 15.....	Richard Evans.....	Hand injured.....	Caught between mine cars.	East Greenville.....	Stark.

INSPECTORS AND DISTRICTS INTO WHICH THE STATE
IS DIVIDED.

ELMER G. BIDDISON,
Chief Inspector of Mines, Columbus, Ohio.

FIRST DISTRICT.

Composed of the counties of Hocking, Jackson, Scioto and Vinton.

R. M. MASON, *Inspector*,
Logan, Hocking county.

SECOND DISTRICT,

Composed of the counties of Athens, Gallia, Lawrence, Meigs and Vinton.

D. H. WILLIAMS, *Inspector*,
Glouster, Athens county.

THIRD DISTRICT.

Composed of the counties of Muskingum, Morgan, Noble and Perry.

D. B. WILSON, *Inspector*,
Corning, Perry county.

FOURTH DISTRICT.

Composed of the counties of Monroe, Belmont, Harrison and Jefferson.

THOMAS MCGOUGH, *Inspector*,
Bridgeport, Belmont county.

FIFTH DISTRICT.

Composed of the counties of Guernsey, Coshocton and Tuscarawas.

W. H. TURNER, *Inspector*,
Cambridge, Guernsey county.

SIXTH DISTRICT.

Composed of the counties of Carroll, Columbiana, Mahoning, Trumbull and
age.

JAMES P. DAVIS, *Inspector*,
Dell Roy, Carroll county, Ohio.

SEVENTH DISTRICT.

Composed of the counties of Medina, Stark, Summit, Wayne and Holmes.

W. H. MILLER, *Inspector*,
Massillon, Stark county, Ohio.

As a means of ready reference the Mines of the State have been set in a detailed manner by Counties, giving the name of the mine, owner or operator, postoffice address, railroad facilities, etc.

FIRST DISTRICT,

R. M. MASON, *Inspector*, Logan, Ohio.

HOCKING COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
New Pittsburg No. 1.....	New Pittsburg Coal Co., Columbus, O.....	D. E. Ritchie, B
New Pittsburg No. 2.....	New Pittsburg Coal Co., Columbus, O.....	D. E. Ritchie, B
New Pittsburg No. 3 or Consol	New Pittsburg Coal Co., Columbus, O.....	D. E. Ritchie, B
New Pittsburg No. 6 or Cawthorn	New Pittsburg Coal Co., Columbus, O.....	J. W. Johnson..
New Pittsburg No. 7.....	New Pittsburg Coal Co., Columbus, O.....	D. E. Ritchie, B
Buckeye No. 1.....	Buckeye Coal & Railway Co., Columbus, O.....	G. E. Tetrick, }
Buckeye No. 2.....	Buckeye Coal & Railway Co., Columbus, O.....	G. E. Tetrick, }
Buckeye No. 3.....	Buckeye Coal & Railway Co., Columbus, O.....	G. E. Tetrick, }
Buckeye No. 4.....	Buckeye Coal & Railway Co., Columbus, O.....	G. E. Tetrick, }
Coalgate	Somers Coal Co., Columbus, O.....	Zeth Williams, ville, O.....
No. 15.....	Jacoby Coal Co., Sand Run, O.....	.....
Snake Hollow.....	C. L. Poston & Co., Nelsonville, O.....	L. D. Poston, ville, O.....
Columbus	Columbus Coal Co., Columbus, O.....	.....
Black Diamond.....	Haydenville Min. and Mfg. Co., Columbus, O.....	.....
Beattie Bros.....	Beatty Bros. Coal Co., Nelsonville, O.....	.....
Stalter No. 1.....	R. Stalter Coal Co., Nelsonville, O.....	R. Stalter, Nels

JACKSON COUNTY.

Superior No. 1.....	Superior Coal Co., Wellston, O.....	H. C. Murphin, O.....
Superior No. 2.....	Superior Coal Co., Wellston, O.....	H. C. Murphin, O.....
Superior No. 3.....	Superior Coal Co., Wellston, O.....	H. C. Murphin, O.....
Superior No. 4.....	Superior Coal Co., Wellston, O.....	O. B. Gould, We
Superior No. 5.....	Superior Coal Co., Wellston, O.....	Geo. Wheldon, O.....
Superior No. 6.....	Superior Coal Co., Wellston, O.....	O. B. Gould, We
Superior No. 7.....	Superior Coal Co., Wellston, O.....	N. M. White, Ja
Chapman	Chapman Coal Co., Jackson, O.....	J. E. Hayes, Cha
Grace	Chapman Coal Co., Jackson, O.....	J. E. Hayes, Cha
Springfield	Chapman Coal Co., Jackson, O.....	J. E. Hayes, Cha
Fluhart No. 1.....	Fluhart Coal Co., Wellston, O.....	Theodore Fluhart, ston, O.....
Fluhart No. 2.....	Fluhart Coal Co., Wellston, O.....	Theodore Fluhart, ston, O.....
Fluhart No. 3.....	Fluhart Coal Co., Wellston, O.....	Theodore Fluhart, ston, O.....
Milton No. 1.....	Milton Coal Co., Wellston, O.....	W. B. Montgome, ston, O.....
Milton No. 2.....	Milton Coal Co., Wellston, O.....	W. B. Montgome, ston, O.....
Milton No. 3.....	Milton Coal Co., Wellston, O.....	W. B. Montgome, ston, O.....
Jones Slope No. 2.....	Jones Coal Co., Jackson, O.....	J. E. Jones, Jac
Acorn Slope	Jones Coal Co., Jackson, O.....	J. E. Jones, Jac
Hurd Shaft.....	Hurd Coal Co., Jackson, O.....	George Wheldon, O.....
Hurd Slope.....	Hippel Coal Co., Coalton, O.....	George Wheldon, O.....
Emma No. 2 New.....	Emma Coal Co., Jackson, O.....	Edwin Jones, Ja
Emma No. 3.....	Emma Coal Co., Jackson, O.....	Edwin Jones, Ja
Northern	Jones & Morgan, Jackson, O.....	Moses Morgan, O.....
Jones & Morgan No. 3.....	Jones & Morgan, Jackson, O.....	Moses Morgan, O.....

means of ready reference the Mines of the State have been arranged in alphabetical manner by Counties, giving the name of the mine, name of the proprietor, postoffice address, railroad facilities, etc.

FIRST DISTRICT,

R. M. MASON, *Inspector*, Logan, Ohio.

HOCKING COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
Drift	Fan	6	5-7	Double	H. V. R. R.
Drift	Fan	6	6-8	Double	H. V. R. R.
Drift	Fan	6	6	Double	H. V. R. R.
Drift	Fan	6	5-7	Double	H. V. R. R.
Drift	Fan	6	6-8	Double	H. V. R. R.
Drift	Fan	6	4-6	Double	H. V. R. R.
Drift	Fan	6	6	Double	H. V. R. R.
Drift	Fan	6	6	Double	H. V. R. R.
Drift	Fan	6	4-7	Double	H. V. R. R.
Drift	Fan	6	6	Double	H. V. R. R.
Drift	Fan	6	5-7	Double	H. V. R. R.
Drift	Fan	6	6	Double	H. V. R. R.
Drift	F. Basket	6	6-8	Double	H. V. R. R.
Drift	F. Basket	6	5-7	Single	H. V. R. R.
Drift	F. Basket	6	6	Single	H. V. R. R.
Drift	Natural	6	6	Pillars and Stumps	H. V. R. R.

JACKSON COUNTY.

Shaft	Fan	2	3- $\frac{1}{2}$	Double	O. S. and C. H. & D.
Shaft	Fan	2	3- $\frac{1}{2}$	Double	O. S. and C. H. & D.
Shaft	Fan	2	4- $\frac{1}{2}$	Double	B. & O. S. W.
Shaft	Fan	2	3-4	Double	C. H. & D.
Drift	Fan	12	3- $\frac{1}{2}$	Double	C. H. & D.
Open	Fan	12	4	Double	C. H. & D. and O. S.
Shaft	Fan	12	3- $\frac{1}{2}$	Double	O. S. R. R.
Drift	Furnace	12	4	Single	O. S. R. R.
Shaft	Fan	12	3- $\frac{1}{2}$	Single	O. S. R. R.
Shaft	Fan	12	3- $\frac{1}{2}$	Single	O. S. R. R.
Shaft	Fan	12	4	Double	B. & O. S. W. and H. V.
Shaft	Fan	12	3- $\frac{1}{2}$	Double	B. & O. S. W. and H. V.
Shaft	Fan	12	2-4	Double	B. & O. S. W.
Shaft	Fan	12	3- $\frac{1}{2}$	Double	B. & O. S. W.
Shaft	Fan	12	4	Double	B. & O. S. W.
Shaft	Fan	12	2-4	Double	O. S. and C. H. & D.
Open	Fan	12	3	Single	O. S. R. R.
Open	Fan	12	3-4	Single	O. S. and C. H. & D.
Open	Fan	12	3-4	Single	O. S. R. R.
Open	Fan	12	2-4	Single	O. S. R. R.
Shaft	Fan	12	3	Single	O. S. R. R.
Drift	Furnace	12	2-3	Single	O. S. R. R.
Shaft	Fan	12	3- $\frac{1}{2}$	Single	O. S. and C. H. & D.
Open	Fan	12	3-4	Single	O. S. and C. H. & D.

FIRST DISTRICT—Concluded.

JACKSON COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent
Wellston No. 3.....	Wellston Coal Co., Wellston, O.....	T. J. Morgan, V O.....
Tom Corwin No. 1.....	Tom Corwin Coal Co., Dayton, O.....	Walter Allen, Wellston, O.....
Machine Coal Co.....	Machine Coal Co., Dayton, O.....	Evan Reese, Glenford, O.....
Wainwright	Wainwright Coal Co., Dayton, O.....	George Harrison, O.....
Buckeye No. 2.....	Buckeye Coal Co., Coalton, O.....	Elmer Sells, Coalton, O.....
Hippel	Hippel Coal Co., Coalton, O.....	W. D. Hippel, Coalton, O.....
Alma	Alma Coal Co., Glen Roy, O.....	Chas. Davis, Glen Roy, O.....
Eclipse	Eclipse Coal Co., Jackson, O.....	E. O. Roberts, Jackson, O.....
Victor No. 1.....	Victor Coal Co., Coalton, O.....	T. J. Evans, Coalton, O.....
Comet	Comet Coal Co., Wellston, O.....	D. C. Jones, Jackson, O.....
Standard	Standard Coal Co., Jackson, O.....	Norris Cameron, Coalton, O.....
Cameron	Coalton Coal Co., Coalton, O.....	Norris Cameron, Coalton, O.....
Tom Rhodes.....	Coalton Coal Co., Coalton, O.....	W. B. Montgomery, Wellston, O.....
Milton No. 4.....	Dayton C. & I. Co., Wellston, O.....	J. C. Hurd, Jr., Jackson, O.....
Price	W. A. Gosline & Son, Toledo, O.....	J. E. Jones, Jackson, O.....
Globe No. 3.....	Globe Iron Co., Jackson, O.....	D. D. Davis, Oak Hill, O.....
Davis of Oak Hill.....	Thomas-Davis Coal Co., Oak Hill, O.....	John E. Jones, Jackson, O.....
Star No. 4.....	Star Furnace Coal Co., Jackson, O.....	John S. Jones, Jackson, O.....
Enterprise	Enterprise Coal Co., Jackson, O.....	D. D. Davis, Oak Hill, O.....
Crescent	Crescent Coal Co., Jackson, O.....	J. M. Armstrong, Wellston, O.....
McKitterick	McKitterick Coal Co., Jackson, O.....	
Armstrong	Armstrong Coal Co., Jackson, O.....	

SCIOTO COUNTY.

Irish Hollow.....	Hanging Rock Iron Co., Hanging Rock, O.	L. W. Dotey, Ger
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VINTON COUNTY.

Star No. 2.....	Star Coal Co., Hawks, O.....	E. W. Keck, Hawk
Ingham	Moorehead Bros. & Jaynes, Mineral, O.....	O. C. Moorehead, Mineral, O.....
Minerton	J. L. Lawler, Minerton, O.....	Wm. Ellis, Oreton
Oreton	Vinton County Coal and Min. Co., Dayton, O.....	C. K. Davis, Glen
Elk Fork.....	Elk Fork Coal Co., McArthur, O.....	Carlus Goddard, V O.....
Rock	Cornelia Mining Co., Wellston, O.....	

FIRST DISTRICT — Concluded.

JACKSON COUNTY — Concluded.

Employed.	Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
21	Shaft	Fan	2	3½-4	Double	C. H. & D.
37	Shaft	Fan	2	3½-4	Double	O. S. and C. H. & D.
15	Shaft	Fan	2	2-3½	Double	B. & O. S. W.
25	Shaft	Fan	2	2-5	Double	C. H. & D.
16	Drift	Furnace	2	2-3½	Single	C. H. & D.
2	Slope	Fan	2	2-3	Single	O. S. R. R.
21	Shaft	Fan	2	4	Double	C. H. & D. R. R.
22	Drift	Furnace	2	2½-3½	Single	O. S. R. R.
9	Drift	Furnace	2	2-3	Single	C. H. & D. R. R.
9	Shaft	Fan	2	3½	Double	O. S. R. R.
13	Shaft	Fan	2	3	Single	O. S. R. R. and C. H. & D.
4	Slope	Furnace	2	2-3½	Single	O. S. R. R.
2	Drift	Natural	2	2-2-3	Single	C. H. & D.
37	Shaft	Fan	2	2½-4	Double	C. H. & D.
9	Drift	Furnace	2	2-3½	Single	O. S. R. R.
21	Shaft	Fan	1	2-3½	Double	Supplies Furnace.
2	Drift	Furnace	5	3	Single	B. & O. S. W.
18	Drift	Fan	1	3½-4	Single	O. S. R. R.
29	Shaft	Fan	2	2-3	Double	B. & O. S. W.
4	Drift	Furnace	2	2½-3	Single	O. S. R. R.
6	Drift	Furnace	5	2-3½	Double	C. H. & D.
6	Slope	Fan	2	3-4	Double	B. & O. S. W. and C. H. & D.

SCIOTO COUNTY.

5 Drift Furnace Long wall B. & O. S. W.

VINTON COUNTY.

7	Drift	Furnace	4	4-½	Single	H. V. R. R.
4	Drift	Furnace	5	3-½	Single	B. & O. S. W.
1	Drift	Furnace	4	4	Single	H. V. R. R.
7	Drift	Furnace	4	2-4	Single	H. V. R. R.
7	Shaft	Fan	4	2-4	Double	H. V. R. R.
4	Shaft	Fan	4	2½-4	Double	C. H. & D.

SECOND DISTRICT,
D. H. WILLIAMS, Inspector, Glouster, Ohio.
ATHENS COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
Carbondale No. 2.....	Carbondale Coal Co., Carbondale, O.....	M. H. Doolittle, O.....
Carbondale No. 3.....	Carbondale Coal Co., Carbondale, O.....	M. H. Doolittle, O.....
Phoenix No. 2.....	Phoenix Coal Co., Chicago, Ill.....	Lewis Jones, C.....
Rends No. 4.....	W. P. Rend, Chicago, Ill.....	Dan McBride, O.....
Briar Ridge No. 6.....	W. P. Rend, Chicago, Ill.....	D. S. Williams, O.....
No. 10.....	Sunday Creek Coal Co., Columbus, O.....	H. Taylor, C.....
No. 10 X.....	Sunday Creek Coal Co., Columbus, O.....	E. D. Fluke, J.....
Mud Fork.....	Courtwright Coal Co., Columbus, O.....	D. C. Thomas, O.....
Bell Run.....	Maple Hill Coal Co., Nelsonville, O.....	Joshua Spencer, O.....
Brial Hill.....	York Clay Mfg Co., Nelsonville, O.....	J. M. Stillwell, O.....
No. 3 or Half Moon.....	Juniper & Barbour, Nelsonville, O.....	A. J. Juniper, O.....
New No. 29.....	Balkinberger & Conway, Nelsonville, O.....	.....
W. Floodwood.....	G. C. Silcot, Glen Ebon, O.....	.....
No. 24.....	Northern Fuel Co., Jacksonville, O.....	.....
Broadwell.....	O. Brent Gard, Marietta, O.....	.....
Federal Valley No. 1.....	W. C. Bates, Columbus, O.....	.....
Federal Valley No. 2.....	Marietta Run C. & M. Co., N. Y. City.....	.....
Sedalia.....	Sedalia Coal Co., Glouster, O.....	.....
Big Run.....	Nice Coal Co., Big Run, O.....	.....
Wells.....	A. H. Wells, Nelsonville, O.....	.....
North Star.....	North Star Coal Co., Oakdale, O.....	L. C. Tippet, O.....
Black Diamond.....	Black Diamond Coal & Coke Co., Columbus, O.....	P. J. Harriman, O.....
Daleton No. 1.....	Luhrig Coal Co., Luhrig, O.....	W. H. Bailey, O.....
Daleton No. 2.....	Luhrig Coal Co., Luhrig, O.....	W. H. Bailey, O.....
Halbert.....	G. V. Shafer & Son, Glen Ebon, O.....	.....
Kenard.....	Hippel Coal Co., Coalton, O.....	.....
Elm Rock.....	Price & Patton, Nelsonville, O.....	L. H. Price, O.....
Chauncey.....	Dover Coal Co., Columbus, O.....	Paige Moore, O.....
Greendale.....	Greendale Furnace Co., Columbus, O.....	Wesley Miske, O.....
Jobs No. 17.....	Wm. Job Coal Co., Glouster, O.....	J. R. Bireckbeck, O.....
Jobs No. 23.....	Wm. Job Coal Co., Glouster, O.....	Jno. W. Blowe, O.....
Doanville.....	C. & H. C. & I. Co., Columbus, O.....	E. B. Pedlow, O.....
Somers No. 1.....	Somers Coal Co., Columbus, O.....	Seth Williams, O.....
Somers No. 2.....	Somers Coal Co., Columbus, O.....	Seth Williams, O.....
Somers No. 3.....	Somers Coal Co., Columbus, O.....	Seth Williams, O.....
Pekin.....	Hocking Valley Coal Co., Columbus, O.....	Mell Rob. Nel, O.....
McLeish.....	McLeish Coal Co., Columbus, O.....	Wm. Palmer, O.....
New Pittsburg No. 4.....	New Pittsburg Coal Co., Columbus, O.....	D. E. Ritchie, O.....
Murray City.....	Greendale Coal Mining Co., Columbus, O.....	J. W. Miskell, O.....

GALLIA COUNTY.

Carl No. 1.....	E. L. Carl, Carlton, O.....	H. V. Carl, O.....
Carl No. 2.....	E. L. Carl, Carlton, O.....	H. V. Carl, O.....

LAWRENCE COUNTY.

New Castle.....	Hanging Rock Iron Co., Hanging Rock, O.....	D. B. Meacham, O.....
Pine Grove Ore.....	Hanging Rock Iron Co., Hanging Rock, O.....	C. M. Lawler, O.....
ley.....	Kelley Nail and Iron Co., Ironton, O.....	.....

SECOND DISTRICT,
D. H. WILLIAMS, Inspector, Glouster, Ohio.
ATHENS COUNTY.

No. Day Hands Employed.	Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
10	Drift	Fan	6	4- $\frac{1}{2}$	Double	B. & O. S. W. R. R.
25	Drift	Fan	6	4- $\frac{1}{2}$	Double	B. & O. S. W. R. R.
58	Shaft	Fan	6	6	Double	T. & O. C.
48	Shaft	Fan	6	6	Double	T. & O. C.
57	Shaft	Fan	6	6	Double	T. & O. C.
71	Shaft	Fan	6	6	Double	T. & O. C.
61	Shaft	Fan	6	6	Double	C. H. V. & T.
50	Shaft	Fan	6	6	Triple	T. & O. C.
29	Drift	Fan	6	6	Double	C. H. V. & T.
16	Slope	F. Basket.....	6	6	Double	C. H. V. & T.
3	Drift	F. Basket.....	6	6	Double	C. H. V. & T.
2	Drift	Natural	6	6	Double	C. H. V. & T.
4	Drift	Furnace	6	6	Double	C. H. V. & T.
45	Shaft	Fan	6	6	Double	T. & O. C.
10	Drift	Furnace	2	10	Double	T. & O. C. Extension.
2	Drift	Furnace	2	10	Double	T. & O. C. Extension.
10	Slope	Fan	7	4 2 3	Double	T. & O. C.
3	Slope	Fan	6	10	Single	T. & O. C. Extension.
1	Drift	Furnace	6	6	Double	C. H. V. & T.
32	Shaft	Fan	6	6	Double	T. & O. C.
19	Drift	Fan	8	10	Double	T. & O. C. Extension.
65	Shaft	Fan	6	6	Double	B. & O. S. W.
90	Shaft	Fan	6	6	Double	B. & O. S. W.
3	Drift	Furnace	6	6	Double	C. H. V. & T.
3	Slope	Fan	6	4- $\frac{1}{2}$	Double	B. & O. S. W.
31	Drift	Fan	6	6	Double	C. H. V. & T.
23	Shaft	Fan	6	6	Double	T. & O. C.
63	Slope	Fan	6	6	Double	C. H. V. & T.
22	Slope	Fan	6	6	Dbl. & Tpl.	T. & O. C.
2	Slope	Fan	6	6	Double	T. & O. C.
59	Slope	Fan	6	6	Double	C. H. V. & T.
	Drift	Fan	6	6	Double	C. H. V. & T.
	Drift	F. Basket.....	6	6	Double	C. H. V. & T.
	Drift	F. Basket.....	6	6	Double	C. H. V. & T.
63	Slope	Fan	6	6	Double	C. H. V. & T.
18	Shaft	Fan	6	6	Double	T. & O. C.
25	Drift	Fan	6	4-7	Double	H. V. R. R.
39	Slope	Fan	2	6-7	Double	H. V. R. R.

GALLIA COUNTY.

11	Drift	Furnace	8	5	Double	C. H. V. & T.
1	Drift	Furnace	8	5	Double	C. H. V. & T.

LAWRENCE COUNTY.

0	Drift	Natural	5	3	Single	N. & W.
2	Drift	Furnace			Single	N. & W.
5	Drift	Furnace		4	Single	N. & W.

SECOND DISTRICT — Concluded.

LAWRENCE COUNTY — Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Ad. of Superintendent.
Lawrence Mill.....	Halley Coal Co., Pedro, O.....	
Hall No. 1.....	Jno. F. Hall Coal Co., Dayton, O.....	
Halley	Halley & Wells, Pedro, O.....	
Nancy	Peter Burke, Ort, O.....	
Belfont No. 1.....	Belfont Iron Co., Ironton, O.....	
Belfont No. 3.....	Belfont Iron Co., Ironton, O.....	

MRIGS COUNTY.

Peacock	Peacock Coal Co., Pomeroy, O.....	M. Ebersbach, Pom O.....
Coal Ridge.....	Coal Ridge Coal and Salt Co., Pomeroy, O.....	J. W. Thomas, Pom O.....
Charter Oak.....	Charter Oak Mining Co., Pomeroy, O.....	B. J. Malone, Pomer O.....
Syracuse Shaft.....	Syracuse Coal and Salt Co., Syracuse, O.....	L. H. Bridgeman, cuse, O.....
Syracuse Slope.....	Syracuse Coal and Salt Co., Syracuse, O.....	
Minersville.....	Russell & Bear, Pomeroy, O.....	Edw. Bear, Minersvil O.....
Rolling Mill No. 2.....	Martin Ebersbach, Pomeroy, O.....	
Buckeye Salt Co.....	Robert Dyke, Pomeroy, O.....	Chas. McQuigg.....
Rockville	J. D. Salisbury Coal Co., Middleport, O.....	J. D. Nash, Midd O.....
Silver Run.....	W. C. Russell, Pomeroy, O.....	
Dabney	Kauff Bros., Middleport, O.....	
Pittsburg	Pittsburg Coal Co., Pomeroy, O.....	B. J. Malone, Po O.....
Noble Summit.....	Salisbury Coal Co., Columbus, O.....	J. D. Nash, Mid O.....
Kochler	Benj. F. Kochler, Pomeroy, O.....	

SECOND DISTRICT — Concluded.

LAWRENCE COUNTY — Concluded.

Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
t	Furnace	5	3	Single	N. & W.
t	Furnace	5	3	Single	C. H. & D.
t	Furnace	5	3	Single	C. H. & D.
t	Natural	5	3	Single	C. H. & D.
t	Furnace	5	3	Single	C. H. & D.
t	Furnace	5	3	Single	C. H. & D.

MEIGS COUNTY.

t	Furnace	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	Ohio River R. R.
t	Fan	8	5	Double	Ohio River R. R.
t	Fan	8	5	Double	Ohio River R. R.
e	Fan	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	K. & M. R. R.
t	Fan	8	5	Double	C. H. V. & T.
t	Furnace	8	5	Double	C. H. V. & T.
e	Furnace	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	Ohio River R. R.
t	Furnace	8	5	Double	Ohio River R. R.

THIRD DISTRICT,

D. B. WILSON, *Inspector*, Corning, Ohio.

MUSKINGUM COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Princess	Perry Smith, Zanesville, O. ....	.....
Granger	Siler Coal Co., McConnellsville, O. ....	.....
Chestnut Valley	Michael Fisher, Zanesville, O. ....	.....
Garrett	Jos. Garrett, Philo, O. ....	.....
Blue Rock	Blue Rock Coal Co., Cedar Run, O. ....	.....
Diamond No. 2	G. W. Joslin, Zanesville, O. ....	.....
Lehew	George M. Lehew, Zanesville, O. ....	.....
Harper's 3 ft.	Thomas Harper, Zanesville, O. ....	.....
Harper's 4 ft.	Thomas Harper, Zanesville, O. ....	.....
Cannellville	John McNally, Dillon, O. ....	.....
Weller	W. H. Weller, Zanesville, O. ....	.....
Maynard	Maynard Bros., Columbus, O. ....	.....
Walnut Hill No. 2	W. H. Blaney, Dillon, O. ....	.....
Edwards No. 2	Maynard Bros., Columbus, O. ....	.....
Oak Knob	Oak Knob Coal Co., Zanesville, O.	John Winefordner, Cans Falls, O.

MORGAN COUNTY.

Rose	Stephen Carding & Son, Rose Farm, O. ....	.....
Rose Valley	Rose Valley Coal Co., Rose Farm, O.	John French, Rose O.

NOBLE COUNTY.

Jumbo	J. W. Young, Sarahsville, O.
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PERRY COUNTY.

Rock Run No. 3	C. & H. C. & I. Co., Columbus, O.	E. B. Pedlow, New ville, O.
No. 5	Troy Coal Co., New Straitsville, O.	James Daugherty Straitsville, O.
No. 8	Sunday Creek Coal Co., Columbus, O.	J. W. Taylor, Corn O.
No. 21	Sunday Creek Coal Co., Columbus, O.	J. W. Taylor, Corn O.
No. 13	Sunday Creek Coal Co., Columbus, O.	J. M. Roan, Corn O.
Congo No. 1	Congo Mining Co., Columbus, O.	C. G. Newton, Corn O.
Congo No. 2	Congo Mining Co., Columbus, O.	C. G. Newton, Corn O.
Rends No. 3	W. P. Rend & Co., Chicago, Illinois.	Lewis Jones, Glom O.
Upson No. 1	Upson Coal Co., Shawnee, O.	Jacob Opperman, bridge, O.
Beech Grove	Opperman Coal Co., Cambridge, O.	Daniel Jenkins, Si O.
X No.	Taylor, Williams & Co., Shawnee, O. ....	.....
Manley	E. W. Lewis & Co., Shawnee, O. ....	.....
Shawnee Valley	Maynard Bros., Columbus, O.	W. E. Williams, Si O.
Lyonsdale	Maynard Bros., Columbus, O.	N. E. Williams, Si O.
Hemlock No. 20	Buckeye Coal & Ry Co., Columbus, O.	J. W. Taylor, Corn O.
Buckeye No. 5 (Cooperative)	Buckeye Coal & Ry Co., Columbus, O.	Edward E. Fluke, ville, O.
No. 23	Buckeye Coal & Ry Co., Columbus, O.	J. W. Taylor, Corn O.
No. 2 (Spring Valley)	Buckeye Coal & Ry Co., Columbus, O.	J. W. Taylor, Corn O.
No. 37	Calvin Essex, New Straitsville, O. ....	.....
Black or No. 2	Tague & Bennett, McLurey, O. ....	.....
New Crescent	New Crescent Mining Co., Roseville, O.	H. H. Guy, Rosevi O.
Union	Ohio Coal and Cement Co., Columbus, O.	D. Mathews, Col O.
No. 11 or 129	George Howe & Son, New Straitsville, O. ....	.....
Bristol No. 1	Bristol Coal Co., Newark, O.	G. A. Blood, Jr., I O.
Briar Hill	J. G. Underwood, Rose Farm, O.	James Palmer, Rose O.
Keystone	Zanesville Coal Co., Zanesville, O. ....	.....

THIRD DISTRICT,
D. B. WILSON, Inspector, Corning, Ohio.
MUSKINGUM COUNTY.

nd of ening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein.	Plan of Working Mine.	Railroad Connections.
.....	F. Basket.....	7	6	Double	O. & L. K.
.....	Furnace	6	3-1	Double	O. & L. K.
.....	Furnace	6	3	Single .....	.....
.....	Furnace	6	2-1	Single	O. & L. K.
.....	Furnace	6	4	Double	O. & L. K.
.....	Furnace	6	6	Double	B. Z. & C.
.....	Furnace	6	3	Single .....	.....
.....	F. Basket.....	6	3	Single .....	.....
.....	F. Basket.....	4	4	Single .....	.....
.....	Furnace	6	3-1	Double	C. S. & H.
.....	F. Basket.....	6	3	Single .....	.....
.....	Furnace	7	4	Double	C. S. & H.
.....	Furnace	6	4	Double	C. S. & H.
.....	Furnace	6	4	Double	C. S. & H.
.....	F. Basket.....	6	3	Double	O. & L. K.

MORGAN COUNTY.

.....	Furnace	6	3-1	Double	C. S. & H.
.....	Furnace	6	4	Double	C. S. & H.

NOBLE COUNTY.

.....	Natural	8a	3-1	Double	B. Z. & C.
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PERRY COUNTY.

.....	Fan	6	9	Double	B. & O.
.....	Natural	6	10	Pillar	C. H. V. & T.
(60 ft.)...	Fan	6	12	Double	T. & O. C.
.....	Fan	6	6-10	Double	T. & O. C.
.....	Furnace	7	5	Double	T. & O. C.
(43 ft.)...	Fan	6	12	Double	C. S. & H.
(53 ft.)...	Fan	6	12	Double	C. S. & H.
(40 ft.)...	Fan	6	12	Double	T. & O. C.
.....	Furnace	6	9	Double	B. & O. and C. S. & H.
.....	Furnace	6	3-1	Double	C. & M. V.
.....	Fan	6	8	Pillar	C. S. & H. and B. & O.
.....	F. Basket.....	6	8	Pillar	C. S. & H. and B. & O.
.....	Furnace	6	8	Pillar	C. S. & H. and B. & O.
.....	Furnace	6	10	Pillar	C. S. & H. and B. & O.
(100 ft.)...	Fan	6	6	Double	C. S. & H.
.....	Fan	6	8	Single	C. H. V. & T.
.....	Fan	6	7	Double	T. & O. C.
(120 ft.)...	Fan	6	7	Double	T. & O. C.
.....	Furnace	6	10	Double	C. H. V. & T.
.....	Furnace	6	2-1	Double	C. & M. V.
.....	Furnace	6	3-1	Double	C. & M. V.
.....	Furnace	6	3-1	Double	C. & M. V.
.....	Natural	6	10	Pillars	C. H. V. & T.
.....	Fan	6	3	Double	B. & O.
(180 ft.)...	Furnace	6	4	Double	C. S. & H.
.....	Fan	6	4	Double	C. & M. V.

THIRD DISTRICT — Concluded.

PERRY COUNTY — Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. / of Superintends
Lyonsdale	M. Meenan, Lyonsdale, O.....	.....
Standard	Saltillo Coal Co., Redfield, O.....	.....
No. 18.....	Wm. Job, Rendville, O.....	J. L. Hickman, Re O.....
Dew or No. 15.....	Leyshon Coal Co., Burr Oak, O.....	.....
Chestnut Ridge.....	A. P. Simons, Redfield, O.....	.....
Midway No. 3.....	Wallace Coal Co., Redfield, O.....	.....
Midway No. 2.....	Wallace Coal Co., Redfield, O.....	Wm. Wallace, Redf O.....
Iron Point No. 3.....	D. S. Richards, Shawnee, O.....	.....
Tague Bros.....	Tague Bros., Crooksville, O.....	A. P. Tague, Cro O.....
Keystone No. 3.....	Orris Coal Co., Zanesville, O.....	H. N. Houk, Rose O.....
Keystone No. 2.....	The Zanesville Coal Co., Zanesville, O.....	N. W. Spencer, M O.....
Black Diamond No. 3.....	Taylor & Price, New Straitsville, O.....	J. H. Taylor, New ville, O.....
Upson No. 2.....	Upson Coal & Mining Co., Shawnee, O.....	Reese E. Williams nee, O.....

THIRD DISTRICT — Concluded.

PERRY COUNTY — Concluded.

No. Day Hands Employed.	Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
4	Drift	Furnace	6	3-1	Double	C. & M. V.
1	Drift	Open fire.....	6	3-1	Double	C. S. & H.
37	Slope (300 ft.)..	Two fans.....	6	12	Double	T. & O. C.
1	Drift	Natural	7	4	Pillars	T. & O. C.
10	Drift	Ex. Steam.....	5	3-1	Single	C. S. & H.
2	Drift	Open fire.....	5	4-1	Double	C. S. & H.
4	Drift	Open fire.....	5	4-1	Double	C. S. & H.
4	Drift	F. Basket.....	6	5-1	Double	B. & O.
6	Drift	Furnace	6	3-1	Double	C. & M. V.
6	Drift	Furnace	6	3-1	Double	C. & M. V.
11	Drift	Furnace	6	3-1	Double	C. & M. V.
2	Drift	Furnace	6	8	Single	B. & O.
1	Drift	Fan	6	8	Double	B. & O. and C. S. & H.

FOURTH DISTRICT,
THOS. MCGOUGH, Inspector, Bridgeport, Ohio.
BELMONT COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
Wheeling Creek No. 1.....	Lorain Coal & Dock Co., Cleveland, O.....	J. E. Waters, S. ville, O.....
Wheeling Creek No. 2.....	Lorain Coal & Dock Co., Cleveland, O.....	J. E. Waters, S. ville, O.....
Crescent No. 1.....	Lorain Coal & Dock Co., Cleveland, O.....	J. H. Moorehead, Clairsville, O.....
Crescent No. 2.....	Lorain Coal & Dock Co., Cleveland, O.....	Wm. Bunney, O.....
Crescent No. 3.....	Lorain Coal & Dock Co., Cleveland, O.....	J. R. Birkbeck, port, O.....
Aetna Standard.....	American Sheet Steel Co., Bridgeport, O.....	Roger Ashton, Ferry, O.....
McConaughy	Jas. McConaughy, Bridgeport, O.....	Chalkley Dawson, O.....
Nail Mill.....	National Steel Co., Bellaire, O.....	O.....
Schicks	M. J. Schick & Co., Bellaire, O.....	O.....
Belmont No. 1.....	Long Bros., Bellaire, O.....	O.....
Empire No. 1.....	Empire Coal Co., Pittsburg, Pa.....	D. B. Brooks, B. ville, O.....
Empire No. 2.....	Empire Coal and Mining Co., Pittsburg, Pa.....	D. B. Brooks, B. ville, O.....
Morgan	G. E. Morgan, Bellaire, O.....	O.....
Maple Hill.....	Maple Hill Coal Co., Barton, O.....	George Atherton, O.....
Boggs No. 2.....	E. N. Boggs, Barton, O.....	John Baugh, S. ville, O.....
Taggarts	Coburn & Wheeler, Barton, O.....	David Colbert, S. ville, O.....
Flushing	Flushing Coal Co., Flushing, O.....	W. G. Williams, O.....
Black Diamond.....	C. Troll, St. Clairsville, O.....	C. W. Troll, S. ville, O.....
Captina	Captina Coal Co., Armstrong's Mills, O.....	Wm. Rankin, Au Mills, O.....
Laughlin	Laughlin Nail Co., Wheeling, W. Va.....	W. L. Glessner, Ferry, O.....
Empire No. 3.....	Empire Coal and Mining Co., Pittsburg, Pa.....	T. B. DeArmit, Pa.....
Cochran	Alex Cochran, Quaker City, O.....	O.....
Gaylord	Gaylord Mining Co., Martins Ferry, O.....	J. O. Jones, Ferry, O.....
O. & W. Va.....	O. & W. Va. Coal Co., St. Clairsville, O.....	C. W. Troll, S. ville, O.....
Glen	Johnson Bros., Glencoe, O.....	O.....
Wegee	Wegee Coal Co., Ambler, O.....	O.....
Pipe Creek.....	Johnson Bros., Dillie's Bottom, O.....	J. J. Johnson, Gl. ville, O.....
Kennon No. 2.....	Kennon Coal Co., Cleveland, O.....	F. P. Corey, Flu. ville, O.....
Tin Plate.....	American Tin Plate Co., Martins Ferry, O.....	Chick Robinson, Ferry, O.....
Belmont Co.....	Belmont Mining Co., Flushing, O.....	Stephen Selway, O.....
Pultney	Pultney Coal Co., Bellaire, O.....	A. J. Morgan, B. ville, O.....

HARRISON COUNTY.

Clover Leaf.....	B. H. Rose, Cleveland, O.....	O.....
Tippecanoe	Tippecanoe Coal Co., Cleveland, O.....	John Selway, T. ville, O.....
Robyville	Roby Coal Co., Cleveland, O.....	J. J. Roby, Ade. ville, O.....

JEFFERSON COUNTY.

Dillon No. 2.....	W. & L. E. Mining Co., Dillonvale, O.....	G. H. Hornick, vale, O.....
Long Run No. 1.....	W. & L. E. Mining Co., Dillonvale, O.....	G. H. Hornick, vale, O.....
Conner No. 1.....	W. & L. E. Mining Co., Dillonvale, O.....	G. H. Hornick, vale, O.....

FOURTH DISTRICT,
THOS. MCGOUGH, Inspector, Bridgeport, Ohio.
BELMONT COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Fan	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Fan	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Fan	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Fan	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	(Domestic.)
Drift	Fan	8	5- $\frac{1}{2}$	Double	(Steel Works.)
Drift	Fan	8	5- $\frac{1}{2}$	Double	B. & O.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	B. Z. & C.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	C. & P.
Drift	Fan	8	5- $\frac{1}{2}$	Double	C. & P.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	(Domestic.)
Drift	Fan	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	C. L. & W.
Drift	Furnace				C. L. & W.
Drift	Fan	8a	4	Double	C. L. & W.
Drift	Fan	8a	5- $\frac{1}{2}$	Double	B. & O.
Shaft	Fan	8a	6	Double	B. Z. & C.
Drift	Fan	8a	5- $\frac{1}{2}$	Double	
Drift	Furnace	8	5- $\frac{1}{2}$	Double	B. & O.
Drift	Furnace	8a	4	Double	B. & O.
Drift	Furnace	8a	5- $\frac{1}{2}$	Double	C. & P.
Drift	Furnace	8	5- $\frac{1}{2}$	Double	B. & O.
lope	Fan	8	5- $\frac{1}{2}$	Double	B. & O.
lope	Furnace	8	5- $\frac{1}{2}$	Double	River R. R.
lope	Fan	8	6	Double	C. & P.
Drift	Fan	8	4- $\frac{1}{2}$	Double	C. L. & W.
Drift	Fan	8	5- $\frac{1}{2}$	Double	
Drift	Furnace	8	4- $\frac{1}{2}$	Double	C. L. & W.
lope	Furnace	8	5- $\frac{1}{2}$	Double	C. L. & W.

HARRISON COUNTY.

Drift	Furnace	6	3- $\frac{1}{2}$	Double	P. C. C. & St. L.
Drift	Furnace	7	6	Double	C. L. & W.
Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E.

JEFFERSON COUNTY.

Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E. R. R.
Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E. R. R.
Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E. R. R.

FOURTH DISTRICT — Concluded.

JEFFERSON COUNTY — Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superint.
Conner No. 2.....	W. & L. E. Mining Co., Dillonvale, O....	G. H. Hornick vate, O.....
Forest City.....	American Sewer Pipe Co., Toronto, O....	W. B. Francy, O.
Calumet Coal.....	American Sewer Pipe Co., Toronto, O....	Samuel McAdoo, O.
High Shaft.....	Steubenville Coal and Mining Co., Steuben- ville, O.....	Wm. Smurthwa benville, O....
Diamond No. 2.....	W. E. Smith, Linton, O.....	.....
Diamond No. 3.....	W. E. Smith, Linton, O.....	.....
Kelley No. 2.....	Kelley Coal Co., Portland Station, O.....	O. B. Lewis.....
McFayden	John C. Allen, Carmen, O.....	.....
Wilson	Bishop & Lee, Steubenville, O.....	Chas. Bishop.....
Walnut Hill.....	O. & P. Coal Co., Cleveland, O.....	John Nixon, Ye
Brilliant	Geo. A. Laughlin, Wheeling, W. Va.....	J. C. Cram, Wh Va.
Glen No. 1.....	Glen Run Coal Co., Cleveland, O.....	Thos. Thomas, | O.
Glen Run No. 2.....	Glen Run Coal Co., Cleveland, O.....	Thos. Thomas, | O.
Rush Run.....	Pittsburg & Ohio River Coal Co., Rush Run, O.....	W. A. Byron, | O.
Diamond No. 4.....	W. E. Smith, Wellsville, O.....	.....

FOURTH DISTRICT—Concluded.

JEFFERSON COUNTY—Concluded.

employed.	Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
5	Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E. R. R.
2	Drift	Furnace	6	3	Double	C. & P.
1	Drift	Furnace	5	2- $\frac{1}{2}$	Double	C. & P.
2	Shaft	Fan	6	4	Cut off.....	(Domestic.)
4	Drift	Furnace	7	5	Double	C. & P.
4	Drift	Furnace	7	5	Double	C. & P.
1	Drift	Fan	8	5- $\frac{1}{2}$	Double	C. & P.
2	Drift	Fan	8	4- $\frac{1}{2}$	Double	P. C. C. & St. L.
2	Drift	Furnace	8	5- $\frac{1}{2}$	Double	Domestic.)
1	Drift	Fan	8	5- $\frac{1}{2}$	Double	C. & P.
1	Shaft	Fan	6	4	Double	C. & P.
1	Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E.
1	Drift	Fan	8	5- $\frac{1}{2}$	Double	W. & L. E.
	Drift	Fan	8	5- $\frac{1}{2}$	Double	C. & P.
	Drift	Fan	7	5	Double	C. & P.

FIFTH DISTRICT,

W. H. TURNER, *Inspector*, Cambridge, Ohio.

COSHOCTON COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superint.
Conesville No. 2.....	David Davis, Conesville, O.....	.....
Conesville No. 3.....	David Davis, Conesville, O.....	.....
Conesville No. 4.....	David Davis, Conesville, O.....	.....
Hay No. 2.....	Thomas Williams & Son, Coshocton, O.....	John Williams, C O.....
Cassingham	Coshocton Coal Co., Coshocton, O.....	Chas. Cassingha shocton, O.....
Hudson No. 1.....	G. W. Cassingham, Coshocton, O.....	.....
Franklin No. 1.....	Columbus Coal & Mining Co., Columbus, O.....	F. N. Barnes, Sta., O.....
Franklin No. 2.....	George Hall, Franklin Station O.....	.....
Wade No. 2.....	Wade Coal Co., Cleveland, O.....	H. D. Dennis, C O.....
Conley No. 2.....	Wade Coal Co., Cleveland, O.....	J. L. Morris, C O.....
Morgan Run No. 3.....	Morgan Run Coal Co., Cleveland, O.....	L. H. Piper, C O.....
Hay No. 3.....	J. H. Robson, Coshocton, O.....	.....
Flint Hill.....	Henry Lear, Coshocton, O.....	.....
Conley No. 1.....	Williams & Son, Coshocton, O.....	Thomas Williams, ton, O.....

GUERNSEY COUNTY.

Farmers	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, By
Walhounding	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, By
Ideal	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, By
Trail Run.....	J. W. Ellsworth, Cleveland, O.....	Dennis Conroy, O.....
Hartford	J. W. Ellsworth, Cleveland, O.....	W. H. Davis, By
Pioneer	J. W. Ellsworth, Cleveland, O.....	W. H. Davis, By
Guernsey	O. & N. Western Coal Min. Co., Cam- bridge, O.....	Jas. S. Connam bridge, O.....
Cisco	Opperman Coal Co., Cambridge, O.....	Thos. E. Richa son, O.....
Robins	Morris & Guild Coal Co., Cambridge, O.....	I. C. Kyte, Guild
Old Orchard.....	Morris & Guild Coal Co., Cambridge, O.....	E. L. Donnelly bridge, O.....
Forsythe	Forsythe Coal Co., Danford, O.....	Homer Forsythe O.....
Nicholson	Ohio Coal Co., Cambridge, O.....	A. J. Warner, O.....
Klonlike	Loonis Moss & Co., Lore City, O.....	Henry Moss, Ky
Imperial	Imperial Mining Co., Cambridge, O.....	W. P. DeVore, bridge, O.....
Little Kate.....	National Coal Co., Akron, O.....	W. A. Lucas, C O.....
Black Top.....	J. H. Somers & Co., Cleveland, O.....	.....
Indian Camp.....	Indian Camp Coal Co., Coshocton, O.....	James Glen, Cos
Pioneer No. 2.....	Byesville Fuel Co., Byesville, O.....	Benjamin Morri ville, O.....

NOBLE COUNTY.

Glenwood	Eastern Ohio Coal Co., Cleveland, O.....	R. T. Price, Gle
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TUSCARAWAS COUNTY.

Somerdale West.....	Somerdale Coal Co., Somerdale, O.....	Frank McIntosh Philadelphia, C
Somerdale No. 2.....	Somerdale Coal Co., Somerdale, O.....	W. L. Moke, S Ohio
Midvale No. 2.....	Midvale-Goshen Coal Co., Massillon, O.....	Frank McIntosh Philadelphia, C

FIFTH DISTRICT.

W. H. TURNER, *Inspector*, Cambridge, Ohio.

COSHOCOTON COUNTY.

No. Day Hands Employed.	Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
7	Drift	Furnace	6	4	Single	P. C. C. & St. L.
2	Drift	Furnace	6	4	Single	P. C. C. & St. L.
16	Drift	Furnace	6	4	Single	P. C. C. & St. L.
2	Drift	Furnace	6	4	Single	W. & L. E.
18	Drift	Furnace	6	3- $\frac{1}{2}$	Double	W. & L. E.
18	Drift	Furnace	6	4	Single	W. & L. E.
12	Drift	Furnace	6	4	Single	P. C. C. & St. L.
8	Drift	Furnace	6	4	Single	P. C. C. & St. L.
15	Drift	Furnace	6	3- $\frac{1}{2}$	Double	W. & L. E.
7	Drift	Furnace	6	3- $\frac{1}{2}$	Single	W. & L. E.
26	Drift	Furnace	6	4	Double	
1	Drift	Iron Bucket	6	3- $\frac{1}{2}$	Single	
1	Drift	Iron Bucket	6	4	Single	
2	Drift	Furnace	6	4	Single	

GUERNSEY COUNTY.

43	Shaft	Fan	7	5- $\frac{1}{2}$	Double	C. & M.
72	Shaft	Fan	7	5- $\frac{1}{2}$	Double	C. & M.
22	Shaft	Fan	7	5- $\frac{1}{2}$	Double	C. & M.
42	Shaft	Fan	7	5- $\frac{1}{2}$	Double	C. & M.
60	Shaft	Fan	7	6	Double	B. & O.
11	Slope	Fan	7	5- $\frac{1}{2}$	Double	C. & M.
8	Drift	Furnace	7	5- $\frac{1}{2}$	Double	B. & O.
33	Shaft	Fan	7	5- $\frac{1}{2}$	Double	C. & M.
70	Shaft	Fan	7	5- $\frac{1}{2}$	Double	B. & O.
40	Shaft	Fan	7	5- $\frac{1}{2}$	Double	B. & O.
23	Slope	Fan	7	5- $\frac{1}{2}$	Double	B. & O.
19	Drift	Furnace	7	6	Double	C. & M.
27	Shaft	Fan	7	5- $\frac{1}{2}$	Double	B. & O.
5	Shaft	Fan	7	6	Double	C. & M.
9	Shaft	Fan	7	6	Double	C. & M.
9	Shaft	Fan	7	6	Double	B. & O.
2	Drift	Natural	6	4- $\frac{1}{2}$	Double	C. & M.
5	Slope	Ex. Steam	7	6	Double	C. & M.

NOBLE COUNTY.

1	Shaft	Fan	7	5	Double	C. & M.
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TUSCARAWAS COUNTY.

Drift	Furnace	6	3- $\frac{1}{2}$	Single	W. & L. E.
Drift	Furnace	6	3- $\frac{1}{2}$	Double	W. & L. E.
Drift	Furnace	6	4	Double	C. L. & W.

FIFTH DISTRICT—Concluded.

TUSCARAWAS COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
Midvale No. 4.....	Midvale-Goshen Coal Co., Massillon, O....	Frank McIntosh, Philadelphia, O.
Midvale No. 5.....	Midvale-Goshen Coal Co., Massillon, O....	Frank McIntosh, Philadelphia, O.
Acme.....	George Markley, Mineral City, O.....	
Buck Horn.....	George Markley, Mineral City, O.....	
Rock Cut.....	John E. Stoner, Sandyville, O.....	
East Goshen No. 1.....	East Goshen Coal Co., Cleveland, O.....	Wm. Empfield, Ne adelphia, O.....
East Goshen No. 2.....	East Goshen Coal Co., Cleveland, O.....	Wm. Empfield, Ne adelphia, O.....
Goshen No. 2.....	Goshen Coal Co., New Philadelphia, O.....	
Eagle Hill.....	Wm. R. Jones, Zoar Station, O.....	
Eagle New.....	Wm. R. Jones, Zoar Station, O.....	
South Side.....	C. E. Holden, Mineral City, O.....	R. R. Morrison, City, O.....
Huff's Run.....	Ridgeway, Burton & Co., Cleveland, O.....	
Huff's Run No. 2.....	Ridgeway, Burton & Co., Cleveland, O.....	Alex Lindsay, Y City, O.....
Long Meadow.....	Ridgeway, Burton & Co., Cleveland, O.....	Alex Lindsay, Y City, O.....
Trenton.....	H. C. Minnich, Tuscarawas, O.....	
Mason.....	J. A. Horn, Canal Dover, O.....	
Massillon-Peacock.....	E. Van Kirk, Mineral Point, O.....	
Twin City.....	Dennison Coal Co., Dennison, O.....	James Ramage, D O.....
Maple Grove.....	Schindler Bros., Tuscarawas, O.....	H. A. Schindler, rawas, O.....
Houk.....	American Sheet Steel Co., Canal Dover, O.	J. L. Houk, Shilw
Dennison.....	American Sheet Steel Co., Canal Dover, O.	Wm. Taylor, Un O.....
Laughlin.....	Lobby Coal Co., Mineral City, O.....	
Erhard.....	Erhard Coal, Oil & Gas Co., Massillon, O.	F. W. Kohl, Mass
Shanesville.....	Shanesville Coal Co., Shanesville, O.....	D. R. Thomas, ville, O.....
Morey Ridge.....	C. J. Nungesser, Beidler, O.....	
Swan.....	Swan Coal Co., Canton, O.....	John J. Evans, C
Indian Hill.....	Seneca Coal Co., Uhrichsville, O.....	P. W. Backento Uhrichsville, O
New Castle.....	New Castle Coal Co., New Philadelphia, O.	J. S. Kollar, Ne delphia, O.....
West Goshen.....	Cleveland & Tuscarawas Coal Co., Cleve- land, O.....	Chas. Cassinghan land, O.....

FIFTH DISTRICT—Concluded.

TUSCARAWAS COUNTY—Concluded.

No. Day Hands Employed.	Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
34	Drift	Furnace	6	3-1	Double	C. L. & W.
6	Slope	Fan	6	3-1	Double	C. L. & W.
2	Drift	Furnace	6	3-1	Single	Valley R. R.
3	Drift	Furnace	6	3-1	Double	C. & M.
4	Slope	Furnace	6	4	Single	Valley.
35	Drift	Furnace	6	4	Double	C. & P.
33	Slope	Fan	6	4	Double	C. & P.
25	Slope	Furnace	6	4	Double	C. L. & W.
8	Drift	Furnace	6	3	Single	C. & P.
1	Drift	Furnace	6	3	Single	C. & P.
5	Drift	Furnace	6	3-1	Single	Valley R. R.
20	Drift	Fan	6	4	Double	Valley R. R.
5	Drift	Furnace	5	3-1	Double	W. & L. E. and V.
4	Drift	Furnace	6	3-1	Double	W. & L. E. and V.
2	Drift	Furnace	6	3-1	Single	Canal.
2	Drift	Furnace	6	3-1	Single	Canal.
21	Drift	Furnace	6	3-1	Double	Valley R. R.
13	Drift	Furnace	6	3-1	Double	P. C. C. & St. L.
1	Drift	Furnace	6	3-1	Single	Single
5	Drift	Furnace	7	3-1	Double	C. L. & W.
3	Drift	Furnace	6	3-1	Single	Single
8	Drift	Furnace	6	3-1	Double	C. & P.
12	Drift	Furnace	6	3	Single	C. L. & W.
12	Slope	Furnace	6	3-1	Double	W. & L. E.
3	Drift	Furnace	6	4	Double	W. & L. E.
3	Drift	Fan	6	3	Single	Valley R. R.
7	Drift	Fan	6	3-1	Double	P. C. C. & St. L.
4	Drift	Furnace	6	3-1	Double	Canal.
7	Drift	Furnace	6	4	Double	C. & M.

SIXTH DISTRICT,

JAS. P. DAVIS, *Inspector*, Salem, Ohio.

CARROLL COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
Scotts No. 3.....	Mardy Coal Co., Tabor, O.....	
Elder	J. D. Owen Mining Co., Canton, O.....	
Linden No. 1.....	Davis Railway Co., Canton, O.....	J. J. Evans, La
Linden No. 6.....	Davis Railway Co., Canton, O.....	O.....
Malvern	Malvern F. C. Clay Co., Malvern, O.....	J. J. Evans, La
Magnolia	Magnolia Coal Co., Magnolia, O.....	O.....
Davis No. 6.....	Sherrodsville Coal Co., Cleveland, O.....	John Fisher, Mah
Beatty No. 2.....	National Fire Roofing Co., Magnolia, O.....	J. J. Dagenhard,
Heatherington No. 2.....	Heatherington Bros., Salineville, O.....	lia, O.....
		John Wolf, Dell
		Wm. Weaver, N
		O.....
		Richard Heather
		Salineville, O.....

COLUMBIANA COUNTY.

Anderson	Heatherington Bros., Salineville, O.....	
Slope	O. & P. Coal Co., Cleveland, O.....	James Black, Sa
Hayes	James Strabley, Salineville, O.....	O.....
Cedar Hill.....	Big Vein Coal Co., Cleveland, O.....	C. R. Provost, Sa
New Shaft.....	Big Vein Coal Co., Cleveland, O.....	O.....
Foster	Foster Coal Co., Salineville, O.....	Samuel Madison.
State Line No. 1.....	State Line Coal Co., East Palestine, O.....	Hugh Laughlin, l
State Line No. 3.....	State Line Coal Co., East Palestine, O.....	estine, O.....
Cherry Valley No. 3.....	Cherry Valley Iron Works, Leetonia, O.....	Hugh Laughlin, l
Pleasant Valley No. 6.....	Powers Mining Co., Negley, O.....	estine, O.....
Pleasant Valley No. 7.....	Powers Mining Co., Negley, O.....	E. M. Peters, L
Sterling	Sterling Coal Co., Rodgers, O.....	E. W. Powers, N
Wheat Hill.....	Thos. Atcheson, East Palestine, O.....	E. W. Powers, N
Salem	Salem Coal Co., Salem, O.....	W. H. Warner,
Pine Hill.....	Card & Prosser, Lisbon, O.....	estine, O.....
Card & Prosser No. 4.....	Card & Prosser, Lisbon, O.....	Wm. Dunn, Sale
Pine Hollow.....	James Ashman, Salem, O.....	Thos. Prosser...
Cement	Ohio Cement Co., Lisbon, O.....	Thos. Prosser...
Fairfield No. 2.....	Fairfield Coal Co., Wooster, O.....	E. B. Rawson, l
Prospect Hill No. 2.....	Prospect Hill Coal Co., East Palestine, O.....	Thos. D. Suthe
Hayesville	W. J. Rainey Coal Co., Cleveland, O.....	Waterford, O...
Lisbon	Lisbon Coal Co., Cleveland, O.....	Mathew Smith,
Elk Run.....	Herriott Coal Co., Elkton, O.....	ville, O.....
Leetonia	Leetonia Coal Co., Washingtonville, O.....	E. J. Marshall, l
McNab	J. B. McNab, Salem, O.....	C. C. Herriott,
		T. R. Lewis, W
		ville, O.....
		Irwin Mellinger
		O.....

HARRISON COUNTY.

Messenger	Cuyahoga Coal Co., Cleveland, O.....	
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JEFFERSON COUNTY -- (Springfield Township.)

Bergholz	Yellow Creek Coal Co., Bergholz, O.....	John Kirk, Ber
Rolling Mill.....	B. Field & White, Irondale, O.....	T. A. White, l
West Pittsburg.....	Eastern Ohio Coal Co., Bergholz, O.....	

SIXTH DISTRICT,

JAS. P. DAVIS, *Inspector*, Salem, Ohio.

CARROLL COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (feet).	Plan of Working Mine.	Railroad Connections.
Drift	Natural	7			W. & L. E. R. R.
8 Drift	Furnace	5	3	Double	Valley R. R.
15 Drift	Furnace	6	3-1/2	Double	Valley R. R.
4 Drift	Furnace	5	9	Double	C. & P.
14 Shaft	Fan	5	4	Double	Valley R. R.
24 Drift	Furnace	7	4	Double	W. & L. E.
6 Drift	Furnace	5	4	Double	C. & P.
4 Drift	Furnace		2-1/2	Single	C. & P.

COLUMBIANA COUNTY.

6 Drift	Furnace		3	Single	C. & P. R. R.
18 Slope	Fan	7	5-1/2	Double	C. & P. R. R.
8 Drift	Furnace	7	5	Double	C. & P. R. R.
14 Drift	Fan	7	4-1/2	Double	C. & P. R. R.
13 Shaft	Fan	7	5	Double	C. & P. R. R.
21 Slope	Fan	6	3-1/2	Single	P. Ft. W. & C.
4 Drift	Furnace	6	2-1/2	Single	P. Ft. W. & C.
2 Slope	Fan	3	3	Single	Erie R. R.
9 Drift	Fan	6	3	Single	P. L. & W.
6 Drift	Furnace	7	2-1/2	Single	P. L. & W.
4 Drift	Furnace	6	2-1/2	Single	P. L. & W.
2 Drift	Furnace	6	3-1/2	Single	
18 Drift	Fan	3	3	Single	Salem R. R.
5 Shaft	Fan	6	3	Single	Erie R. R.
0 Drift	Fan		2-1/2	Single	Erie R. R.
4 Drift	Furnace	4	2-1/2	Single	
2 Drift	Furnace				Erie R. R.
4 Drift	Fan	6	3-1/2	Single	P. Ft. W. & C.
1 Slope	Fan	6	3-1/2	Single	P. Ft. W. & C.
6 Drift	Furnace		3	Single	C. & P.
7 Drift	Fan	6	3-1/2	Single	Erie R. R.
8 Drift	Furnace	6	2-1/2	Single	P. L. & W.
3 Slope	Fan	3	2-1/2	Single	P. Ft. W. & C.
(New mine.)					

HARRISON COUNTY.

| Drift | Furnace | 7 | 4 | Double | P. C. C. & St. L.

JEFFERSON COUNTY--(Springfield Township.)

1 Drift	Fan	5	2-1/2	Single	L. E. A. & W.
Slope	Fan	6	3	Single	C. & P.
Slope	Fan	6	5	Double	L. E. A. & W.

SIXTH DISTRICT -- Concluded.

MAHONING COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent
Fairview No. 3.....	Ohio Coal & Clay Co., Washingtonville, O.	John Hileman, Cleveland, O.
Fairview No. 4.....	Ohio Coal & Clay Co., Washingtonville, O.	John Hileman, Cleveland, O.
Stoffer	National Coal & Clay Co., Washingtonville, O.	Frank Stouffer, Washingtonville, O.
McKinley	C. C. Cook, Beloit, O.	
Greenamyer	J. B. McNab, Salem, O.	

PORTAGE COUNTY.

Hutson No. 2.....	Hutson Coal Co., Lloyd, O.	Thos. J. Williams, O.
Hutson No. 4.....	Hutson Coal Co., Lloyd, O.	Thos. J. Williams, O.
Hutson No. 5.....	Hutson Coal Co., Lloyd, O.	Thos. J. Williams, O.
Hutson No. 6.....	Hutson Coal Co., Lloyd, O.	Thos. J. Williams, O.

TRUMBULL COUNTY.

Keel Ridge.....	Witch Hazel Coal Co., Youngstown, O.	W. J. Sampson...
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SIXTH DISTRICT — Concluded.

MAHONING COUNTY.

No. Day Hands Employed.	Kind of Opening.	Mode of Ventilation.	No. of Scam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
16	Slope	Fan	3	2-1-3	Single	Erie R. R.
5	Drift	Fan	4	3	Single	Erie R. R.
9	Shaft	Fan	3	2-1	Single	Erie R. R.
13	Shaft	Fan	2	3	Single	P. Ft. W. & C.
4	Shaft	Fan	3	2-1	Single	

PORTAGE COUNTY.

6	Shaft	Fan	1	4	Single	L. E. A. & W.
31	Shaft	Fan	1	4	Single	L. E. A. & W.
16	Shaft	Fan	1	4	Single	L. E. A. & W.
15	Shaft	Fan	1	4	Single	L. E. A. & W.

TRUMBULL COUNTY.

3	Drift	Furnace	5	4	Single	L. S. & M. S.
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SEVENTH DISTRICT,

W. H. MILLER, *Inspector*, Massillon, Ohio.

MEDINA COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Card Slope No. 3.....	Card Coal Co., Cleveland, O.....	O. V. Dibble, Wadsworth, O.....
Akron No. 4.....	Card Coal Co., Cleveland, O.....	O. V. Dibble, Wadsworth, O.....
Whelan No. 2.....	Card Coal Co., Cleveland, O.....	John Whelan, Jr., Wadsworth, O.....
Klondike	Hutchinson Coal Co., Wadsworth, O.....	John Hutchinson, Wadsworth, O.....
Wagoners	Excelsior Coal Co., Akron, O.....	Richard Allen, Wadsworth, O.....
Easter	Silver Creek Coal Co., Wadsworth, O.....	Geo. Robbins, Wadsworth, O.....
Robins	Robins Coal Co., Wadsworth, O.....	

SUMMIT COUNTY.

Turkey Foot.....	Brewster Coal Co., Akron, O.....	J. J. Dagenhard, Massillon, O.....
Fox Lake.....	Massillon Coal Mining Co., Cleveland, O.....	Theo. F. Geltz, Massillon, O.....

STARK COUNTY.

Willow Springs.....	Massillon Coal Mining Co., Massillon, O.....	Preston Burton, Massillon, O.....
North Massillon No. 2.....	Massillon Coal Mining Co., Massillon, O.....	Preston Burton, Massillon, O.....
Singer Shaft.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Moffit, North Massillon, O.....
Bookwalter	Massillon Coal Mining Co., Massillon, O.....	Wm. Moffit, North Massillon, O.....
Minglewood No. 4.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Moffit, North Massillon, O.....
Warwick No. 1.....	Massillon Coal Mining Co., Massillon, O.....	E. E. Fox, Massillon, O.....
Warwick No. 2.....	Massillon Coal Mining Co., Massillon, O.....	E. E. Fox, Massillon, O.....
New Greenville.....	Massillon Coal Mining Co., Massillon, O.....	Wm. James, Massillon, O.....
Tally Ho.....	Massillon Coal Mining Co., Massillon, O.....	Jno. Featherstone, Massillon, O.....
Central	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Krause No. 6.....	Massillon Coal Mining Co., Massillon, O.....	C. R. Klien, Canton, O.....
Brookfield No. 2.....	Massillon Coal Mining Co., Massillon, O.....	R. W. Johns, Massillon, O.....
Stanwood	Massillon Coal Mining Co., Massillon, O.....	H. L. Leahy, Massillon, O.....
W. Massillon No. 3.....	E. G. Krause & Co., Cleveland, O.....	Geo. W. Guider, Massillon, O.....
Elm Run No. 3.....	Elm Run Coal Co., Massillon, O.....	J. A. Wilson, Massillon, O.....
Elm Run No. 4.....	Elm Run Coal Co., Massillon, O.....	Wm. Penman, Elm Run, O.....
Drake	Drake Coal Co., Massillon, O.....	C. Matthews, Crystal Springs, O.....
Crystal Springs.....	Crystal Springs Coal Co., Massillon, O.....	W. H. Randolph, Crystal Springs, O.....
Pleasant Valley.....	Pleasant Valley Coal Co., Alliance, O.....	
Summit Hill.....	L. E. Smith, Greentown, O.....	
Woodland	Massillon & Cleveland Coal Co., Cleveland, O.....	Phillip Sonhalter, Massillon, O.....
Eureka	Massillon & Cleveland Coal Co., Cleveland, O.....	August Brenkamp, Massillon, O.....
Pocock	J. F. Pocock, Massillon, O.....	C. A. Kouth, Massillon, O.....
Massillon-Standard	Fred Hess, Navarre, O.....	

SEVENTH DISTRICT.

W. H. MILLER, *Inspector*, Massillon, Ohio.

MEDINA COUNTY.

ing.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein.	Plan of Working Mine.	Railroad Connections.
.....	Furnace	1	4	Double	Erie R. R.
.....	Furnace	1	4	Double	Erie R. R.
.....	Ex. Steam.....	1	4	Double	Erie R. R.
.....	Furnace	1	3-1	Double	Erie R. R.
.....	Ex. Steam.....	1	4	Double	Erie R. R.
.....	Ex. Steam.....	1	4	Double	Erie R. R.
.....	Ex. Steam.....	1	3-1	Single	Erie R. R.

SUMMIT COUNTY.

.....	Fan	1	4	Double	C. A. & C.
.....	Fan	1	4	Double	C. A. & C.

STARK COUNTY.

.....	Furnace	6	4	Double	Valley R. R.
.....	Fan	1	4	Double	C. L. & W.
.....	Fan	1	4	Double	P. Ft. W. & C.
.....	Ex. Steam.....	1	5	Double	W. & L. E.
.....	Fan	1	4-1	Double	P. Ft. W. & C.
.....	Fan	1	5	Double	W. & L. E.
.....	Ex. Steam.....	1	4-1	Double	W. & L. E.
.....	Fan	1	5	Double	W. & L. E.
.....	Fan	1	4	Double	C. A. & C.
.....	Fan	1	5	Double	W. & L. E.
.....	Ex. Steam.....	1	5	Double	C. L. & W.
.....	Ex. Steam.....	1	5	Double	W. & L. E.
.....	Fan	1	6	Double	C. L. & W.
.....	Fan	1	5	Double	P. Ft. W. & C.
.....	Fan	1	5	Double	C. L. & W.
.....	Fan	1	5	Double	C. L. & W.
.....	Fan	1	5	Double	P. Ft. W. & C.
.....	Ex. Steam.....	.....	4	Double	C. L. & W.
.....	Furnace	5	3	Single	A. & N.
.....	Furnace	4	6	Single	V. & R.
.....	Fan	1	5	Double	C. L. & W.
.....	Ex. Steam.....	1	4	Double	C. L. & W.
.....	Fan	1	5	Double	W. & L. E.
.....	Ex. Steam.....	1	3	Double	Ohio Canal.

SEVENTH DISTRICT — Concluded.

STARK COUNTY — Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
Massillon Fire Brick.....	Massillon Fire Brick Co., Massillon, O.....	W. J. Hipp, Mass
McGinty	Louisville Brick & Tile Co., Louisville, O..	Oliver Brumbaugh ville, O.....
Indian Run.....	Indian Run Coal Co., Canton, O.....	John Zuber, Ca
Stark	Stark Coal Co., Massillon, O.....	J. L. Greene, M O.....
Canton Stoneware.....	John Hadley (Lessee), Canton, O.....	
Albert Ball.....	F. L. Sheatzley, North Industry, O.....	
Pigeon Run.....	Massillon Pigeon Run Coal Co., Massil- lon, O.....	Lewis Brenkamp, lon, O.....
Chestnut Hill.....	Drewery & Son, Clinton, O.....	W. H. Drewrey, O.....
C. & O. B.....	National Fire Roofing Co., Osnaburg.....	John Merley, C
Crescent	Crescent Coal Co., Alliance, O.....	J. J. Robertson, O.....
Fox	Fox Coal Co.....	George Swier, O.....

WAYNE COUNTY.

West Lebanon No. 1.....	West Lebanon Coal Co., Wooster, O.....	C. J. Brokensh nolia, O.....
Mobile	W. P. Ries, Doylestown, O.....	
Wayne	Ohio Salt Co., Wadsworth, O.....	O. V. Dibble, W O.....
Billman	Card & Prosser Coal Co.....	John Whelan...

SEVENTH DISTRICT — Concluded.

STARK COUNTY — Concluded.

Kind of Opening.	Mode of Ventilation.	No. of Seam Penetrated.	Thickness of Vein (Feet).	Plan of Working Mine.	Railroad Connections.
ft	Furnace .....	.....	5	Single	P. Ft. W. & C.
ft	Furnace	6	3	Single	P. Ft. W. & C.
ft	Furnace	6	3	Double	W. & L. E.
ft	Ex. Steam.....	1	4	Double	W. & L. E.
ft	Furnace	4	5	Double	W. & L. E.
ft	Furnace	6	3	Single .....	.....
ft	Ex. Steam.....	1	5	Double	W. & L. E.
ft	Furnace	1	3	Single .....	.....
ft	Furnace	6	3	Single	W. & L. E.
pe	Fan	5	3	Single	A. & N. R. R.
ft	Ex. Steam.....	1	5- $\frac{1}{2}$	.....	C. L. & B.

WAYNE COUNTY.

ft	Ex. Steam.....	1	5- $\frac{1}{2}$	Double	C. A. & C.
ft	Furnace	1	4	Single .....	.....
pe	Ex. Steam.....	1	3- $\frac{1}{2}$	Double	Erie R. R.
pe	Ex. Steam.....	1	4	Double	Erie R. R.

LIST OF FIRE CLAY MINES.

Name of Owner or Operator.	P. O. Address.
ATHENS COUNTY.	
Nelsonville Sewer Pipe Co.....	Nelsonville.
East Clayton Clay Manufacturing Co.....	"
Athens Brick Co.....	Athens.
Wassall Fire Clay Co.....	Columbus.
CARROLL COUNTY.	
Minerva Paving Brick Co.....	Minerva.
Canton & Malvern F. B. & P. Co.....	Canton.
National Fire Roofing Co.....	Magnolia.
Malvern F. C. Co.....	Malvern.
COLUMBIANA COUNTY.	
F. P. Wherry.....	East End, Liverpool
Michael Murphy	"
American Sewer Pipe Co.....	"
Vulcan Clay Co.....	Vulcan.
Buckeye Brick Works.....	Wellsville.
Champion F. B. Works.....	"
Keystone F. C. Co.....	Lisbon.
Card & Prosser Coal Co.....	"
F. L. Heastand.....	Homeworth
Columbia F. C. Co.....	Cleveland.
Standard Pottery Co.....	Salineville.
H. A. Thompson & Co.....	"
Ludwig Frenger	New Waterford
HOCKING COUNTY.	
Columbus B. & T. C. Co.....	Columbus.
Parley Phelps	Gore.
Leroy Kemper	"
Logan Brick Manufacturing Co.....	Logan.
Joe Bartholow	"
HOLMES COUNTY.	
Millersburg B. & T. Co.....	Millersburg
David Miller	"
Redett & Sons.....	Fredericksburg
JACKSON COUNTY.	
Oak Hill F. B. and Coal Co.....	Oak Hill.
Aetna F. B. Co.....	"
Jefferson Furnace Co.....	"

LIST OF FIRE CLAY MINES — Continued.

Name of Owner or Operator.	P. O. Address.
JEFFERSON COUNTY.	
Sewer Pipe Co.....	Empire.
C. Co.....	"
r Sewer Pipe Co.....	Calumet.
Sewer Pipe Co.....	Steubenville.
C. Co.....	Wellsville
Brick Works.....	Irondale.
ritschaw	"
C. Works.....	
LAWRENCE COUNTY.	
Rock Iron Co.....	Hanging Rock.
illiard.....	Steece.
Wells.....	Pedro.
MAHONING COUNTY.	
F. C. Co.....	Greenford.
lters.....	Poland.
stman.....	Berlin Centre.
ld	Salem.
Wilderson.....	East Lewiston.
Coal & Clay Co.....	Washingtonville.
rick Co.....	Alliance.
MUSKINGUM COUNTY.	
Sand & Facing Co.....	Columbus.
Ford	Roseville.
B. Co.....	Zanesville.
imp.....	"
.....	"
esville S. P. & B. Co.....	"
ing	Ellis.
ollin	Hopewell.
PERRY COUNTY.	
ightshoe	Somerset.
arky	Crooksville.
cKeever	"
man	"
eburner.....	"
len	Roseville.
gton P. B. Co.....	New Lexington.
g and Manufacturing Co.....	Shawnee.

LIST OF FIRE CLAY MINES — Continued.

Name of Owner or Operator.	P. O. Address
SCIOTO COUNTY.	
Scioto Star F. B. Works.....	Portsmouth.
Webster F. B. Co.....	South Webster
Morgan & Horton.....	Eifort.
Scioto F. B. Co.....	Sciotoville.
W. E. Kettler.....	Lilly.
STARK COUNTY.	
The Royal Brick Co.....	Canton.
Canton P. B. Co.....	"
Imperial Shale Brick Co.....	"
Canton Hollow Brick Co.....	"
Rev. J. H. Harrier.....	North Industr.
Massillon Stone & F. B. Co.....	Massillon.
The H. B. Camp Co.....	Akron.
Riley Newhouse.....	Magnolia.
J. B. Hoover.....	Alliance.
Louisville B. & T. Co.....	Louisville.
Diamond Portland Cement Co.....	Middlebranch.
Champion Tile Works.....	Louisville.
Canton Sparta Brick Co.....	Mineral City.
National F. Roofing Co.....	Osnaburgh.
SUMMIT COUNTY.	
Robinson Merrill Pottery Co.....	Akron.
Buckeye Sewer Pipe Co.....	"
Akron Clay Co.....	"
J. C. Ewert & Co.....	"
The Robinson Bros. Co.....	"
Myers & Lloyd.....	Mogadore.
Reuben Swinehart.....	East Akron.
J. Stetter.....	"
American Clay Manufacturing Co.....	Pittsburg, Pa.
TUSCARAWAS COUNTY.	
American Clay Manufacturing Co.....	Uhrichsville.
Buckeye F. C. Co.....	"
Advance F. C. Co.....	"
Dover F. B. Co.....	Cleveland.
C. E. Holden.....	Mineral City.
J. J. Cristner & Sons.....	Baltic.
Crown F. C. Co.....	Akron.
VINTON COUNTY.	
Jacob Earnheart.....	Hue.
Cornelia Mining Co.....	Wellston.

LIST OF FIRE CLAY MINES — Concluded.

Name of Owner or Operator.	P. O. Address.
WAYNE COUNTY.	
amp & Co.....	Akron.

LIST OF IRON ORE MINES.

Name of Owner or Operator.	P. O. Address.
JACKSON COUNTY.	
ron Co.....	Jackson.
Iron Co.....	Oak Hill.
LAWRENCE COUNTY.	
non Iron Co.....	Campbell.
& Co.....	Olive Furnace.
Rock Iron Co.....	Hanging Rock.
Villiard.....	Steece.
z Wells.....	Pedro.
SCIOTO COUNTY.	
re Iron Co.....	Bloom Switch.
Rock Iron Co.....	Hanging Rock.
& Horton.....	Eifort.
VINTON COUNTY.	
Mining Co.....	Wellston.

LIST OF LIMESTONE QUARRIES.

Name of Owner or Operator.	P. O. Address.
ADAMS COUNTY.	
John McNeilan	West Union
R. J. Kincaid	"
H. T. Herdman	Locust Grove
S. T. Rice	Portsmouth
L. S. Rice	"
J. H. Ellison	Manchester.
Samuel Hopkins	"
ALLEN COUNTY.	
C. L. Sanford	Lima.
Western Ohio Railway Co.	"
David Joseph	"
Fetter & Sons	"
Frank Roush	"
Edw. Gray	"
J. W. Long	"
Allen Joseph	"
Pugh Stone Co.	"
J. C. Marsh	Herring.
Watt Bros	"
L. J. Siddell	Bluffton.
Mrs. G. F. Greenwald	"
Conrad Triplehorn	"
Mollett Bros	"
E. J. Ford	Scotts Cro
D. T. Jones & Co.	Vendocia.
J. C. Ford	Elida.
Fisher & Holler	Delphos.
BELMONT COUNTY.	
Meister Bros	Bridgeport.
BUTLER COUNTY.	
Jno. Killfoyle	Hamilton.
D. M. Sheley	"
J. B. Scott	"
G. Kuentzle	"
Daniel Pabst	"
W. H. McCurley	Ross.
A. Law	Jacksonbor
CLARK COUNTY.	
Moones & Co.	Cold Sprin
Casparis Stone Co.	Columbus.
Daniel Baker	Enon.
Springfield Stone & Lime Co.	Springfield
Samuel S. Taylor	"
Mills Bros	"
The Moores Lime Co.	"
J. W. Jenkins	"
W. A. Rubsam	"

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
CLERMONT COUNTY.	
Correll	Loveland.
W. Harlow	Marathon.
Clark	Batavia.
CRAWFORD COUNTY.	
Conavely	Osceola.
Conavely	"
Sword Stone Co.	Bucyrus.
Haren	Lykens.
Coniff	Spore.
CLINTON COUNTY.	
C. Miars	Wilmington.
Miars	"
Brown	"
Benlehr	"
Frazier	"
Coniff	"
Hard	"
Harbuck	"
Clark	New Vienna.
Oglesby	Clare.
Miller	Midland.
West	West Woodville.
Brant	"
DELAWARE COUNTY.	
Campbell	Delaware.
Dwens	"
Edith & Sons	Radnor.
Merchant	Rathbone.
Coniff	"
Warren	Warrenburg.
Time & Stone Co.	Delaware.
DARKE COUNTY.	
Grishey	Greenville.
Penoweth	Weaver Station.
ERIE COUNTY.	
Shoeffle	Sandusky.
Callan	"
Conner	"
Rueger, Jr.	"
Island L. & T. Co.	Cleveland.
Isles	Sand Hill.
Conner	"

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address
FRANKLIN COUNTY.	
Jonas Wilcox	Columbus.
Columbus Stone Co.	"
Casparis Stone Co.	"
M. McNinch	"
Jas. G. Legg	Marble Cliff.
Wm. Lamb	Dublin.
J. C. Thompson	"
N. Schofield	Hilliards.
GREENE COUNTY.	
Mary J. Archer	Zimmerman.
The D. S. Irwin	Cedarville.
Jno. B. Taylor	"
Boots, Bales & Conklin	New Jasper.
Geo. C. Toland	Jamestown.
Howard Flater	Fairfield.
Jos. Smith	Wilberforce.
GALLIA COUNTY.	
Gallia Lime & Coal Co.	Gallia.
HAMILTON COUNTY.	
Runnebohm Grower	2229 Fowler A St. D., Cincin
Ernest Howe	225 Stark St., Cincinnati.
City Work House	Cincinnati.
Benj. Cooney	178 Avondale Cincinnati.
Henry Stagg & Sons	"
Jno. Goodman	"
Matthew Slatterly	"
Arthur W. Davis	"
Grant Bros	"
Nicholas Ruebel	"
W. R. Moore	"
W. E. Weihe	Carthage.
Jacob Weber	"
Sister of the Good Shepherd	"
Chas. M. Field	Glendale.
Rucker Stone Co.	Greenfield.
Ernest Zaeske	Cheviot.
C. S. Boone	Milford.
W. Manschunger	Pleasant Ridge.

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
HANCOCK COUNTY.	
Is & Son.....	Findlay.
Irisher.....	"
her.....	"
moonover.....	"
McCall.....	"
ut.....	Mt. Blanchard.
Iros.....	Arlington.
fman.....	Rawson.
kle.....	"
in.....	McComb.
HARDIN COUNTY.	
essell.....	Ada.
.....	"
and.....	Dunkirk.
Arthur & Co.....	Kenton.
town.....	Columbus.
og.....	Patterson.
HIGHLAND COUNTY.	
it.....	Greenfield.
one Co.....	"
kerton.....	Lynchburg.
arp. Sr.....	"
.....	Leesburg.
er.....	"
nix.....	Hillsboro.
loe.....	Sorg.
HOLMES COUNTY.	
McCall.....	Millersburg.
JACKSON COUNTY.	
& Hank.....	Wellston.
Furnace Co.....	Oak Hill.
tes.....	Kitchen.
LAWRENCE COUNTY.	
ard & Co.....	Ironton.
ock Iron & Coal Co.....	Hanging Rock.
e.....	Steece.
Wells.....	Pedro.
z Co.....	Olive Furnace.

of M.

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
LOGAN COUNTY.	
Bellefontaine Stone & Lime Co.....	Bellefontaine.
Sprague & Cantwell.....	"
H. M. Brown & Son.....	Belle Centre.
Jno. L. Stratton.....	West Middleburg
Jacob Piatt.....	West Liberty.
H. D. Randall.....	"
LUCAS COUNTY.	
Thos. Hehehan.....	Toledo.
J. L. Pray & Son.....	White House.
Stephen Brogan.....	"
Zeller Bros.....	Maumee.
MARION COUNTY.	
Owens & Evans.....	Owen.
The Jno. Evans Lime & Stone Co.....	Marion.
The Norris & Christian L. & S. Co.....	"
Jas. G. Fairbank.....	"
D. M. Hinamon.....	"
MIAMI COUNTY.	
Maxwell Stone Co.....	Ludlow Falls.
F. M. Coppock.....	"
Jos. Kopp.....	"
D. C. Stalter.....	Pickway.
The Ohio Marble Co.....	"
D. L. Face.....	Covington.
J. W. Ruhl.....	"
C. B. Fletcher.....	"
Levi Falknor.....	"
Chas. Hoover.....	"
Chas. Jackson.....	"
Oliver Nichodemus.....	North Claytor
S. McLaughlin.....	"
J. M. C. Dean.....	Brandt.
Jas. A. Brubaker & Son.....	Rex.
W. Youtsev.....	Troy.
The Tippi Building & Manufacturing Co.....	Tippecanoe C
MONTGOMERY COUNTY.	
The Lewis & Talbot Stone Co.....	Dayton.
D. P. Oram.....	"
Chas. W. Barr.....	"
Jos. Julick.....	"
N. E. Kimmel.....	"
J. Seybould.....	"
H. B. Shoup.....	"

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	F. O. Address.
t	"
l	Centerville.
ns	Englewood.
gas	"
v	Union.
ndale	"
tney	Germantown.
iver	Farmersville.
er	Amity.
itman	"
MUSKINGUM COUNTY.	
en	Dresden.
s	Roseville.
.....	Zanesville.
MERCER COUNTY.	
er	Ft. Recovery.
OTTAWA COUNTY.	
me Co.	Toledo.
n	"
y	Genoa.
ite Lime Co.	Martin.
Co.	Clay Center.
ngham	Rocky Ridge.
y	"
id L. & T. Co.	Cleveland.
Lime Co.	Limestone.
PAULDING COUNTY.	
inson	Junction.
rman	Roselms.
& Sons	Scott.
Adams	Elkwood.
Bros	Ada.
PICKAWAY COUNTY.	
Z. McCoy	Circleville.
PERRY COUNTY.	
ly	Maxville.

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address
PIKE COUNTY.	
G. W. Nace.....	Sinking Springs
PREBLE COUNTY.	
J. H. Killough.....	College Corner
E. A. Ridenour.....	"
O. M. Wright.....	"
Jno. Elliott.....	"
Jno. Wright.....	"
R. M. Hayes.....	Fairhaven.
Chester Elliott.....	"
Jas. Saylor.....	Eaton.
Jas. A. Kautz & Co.....	"
Elam Fisher.....	"
I. J. Weaver.....	Lewisburg.
F. J. Wilson & Co.....	"
Nathan C. Sloane.....	Morning Sun.
G. W. Mann.....	"
Jas. White.....	Camden.
Peter Fouts.....	"
Richard Danily.....	New Paris.
New Paris and Richmond Stone Co.....	Richmond, Ind.
Noah Nill.....	West Alexandr
PUTNAM COUNTY.	
A. M. Evans.....	R. R. No. 2. Ott
Jno. Bridenbaugh.....	Pandora.
Henry Hulty.....	"
Geo. Doriot.....	"
T. W. Thomas.....	Rimer.
J. J. Guffy.....	"
J. B. Schurman.....	Ft. Jennings.
Nicholas Laner.....	Ottaville.
Jno. Bowersock.....	Wetzell.
Samuel Myers.....	Cascade.
Fred Seyer.....	Gilboa.
David P. Shoemaker.....	Columbus Gro
R. M. Kroft.....	Ada.
SANDUSKY COUNTY.	
Gotttron Bros.....	Fremont.
A. R. Corser.....	"
B. Sancer.....	"
Wm. Creech.....	Bellevue.
Dohn Limestone Co.....	Gibsonburg.
Zorn-Hornung Co.....	"
J. J. Urchell.....	Toledo.

LIST OF LIMESTONE QUARRIES — Continued.

Name of Owner or Operator.	P. O. Address.
SENECA COUNTY.	
Ice Geiger.....	Bloomville.
er & Son.....	"
Building and Sandstone Co.....	Tiffin.
alum Lime Co.....	"
& Co.....	Fostoria.
Humphrey.....	Toledo.
	Flatrock.
	"
wiler.....	Bloomville.
ul.....	"
mstrong.....	Republic.
er.....	West Lodi.
STARK COUNTY.	
Wearstler.....	Oval City.
apsaddle.....	Marlboro.
H. Harrier.....	North Industry.
nd Portland Cement Co.....	Middlebranch.
Seifort.....	Paris.
SCIOTO COUNTY.	
on Co.....	Bloom Switch.
& Horton.....	Eifort.
& Sons.....	Freestone.
SUMMIT COUNTY.	
ebbb.....	Mogadore.
UNION COUNTY.	
eley.....	Jerome.
VAN WERT COUNTY.	
ilie.....	Convoy.
ance.....	Bloomville.
iple.....	Van Wert.
ey & Sons.....	Scott.
Sadd.....	Middlepoint.
Bros.....	Ada.
af Stone Co.....	Willshire.
Ireland.....	Van Wert.
roft.....	Ada.

LIST OF LIMESTONE QUARRIES — Concluded.

Name of Owner or Operator.	P. O. Address
VINTON COUNTY.	
Cornelia Mining Co.....	Wellston.
WOOD COUNTY.	
Daugherty & Co.....	Toledo.
The Lime City Co.....	"
J. B. Luckey.....	"
N. B. Eddy & Co.....	Lucky.
J. W. & J. J. Urschel.....	Sugar Ridge.
Snowflake Lime Co.....	Bowling Green.
Jas. Miller.....	"
Geo. E. Mercer.....	Stoney Ridge.
Isaac Hufford.....	Grand Rapids.
L. Strayer.....	Hammanburgh.
H. P. Myer.....	Carey.
M. Daum & Co.....	Ada.
Patterson Bros.....	

MINING LAWS
OF THE
STATE OF OHIO
WITH
LATEST AMENDMENTS.

PUBLISHED BY E. G. BIDDISON,
CHIEF INSPECTOR OF MINES.

(167)

Mining Laws of Ohio.

INSPECTOR OF MINES.

SEC. 290. For the purpose of facilitating an efficient thorough inspection of mines in Ohio, and to provide an adequate inspecting force therefor, the governor shall appoint, by and with the consent of the senate, one chief inspector, who, with the approval of the governor, shall appoint five district inspectors of mines; the chief inspector shall hold his office for the term of four years, and the district inspectors shall hold their office for the term of three years from the date of their appointment, and until their successors are appointed and qualified; the first appointments hereunder shall be made within thirty days from the date when this act shall take effect; and in case of the resignation, removal or death of the chief inspector, or any district inspector, the vacancy shall be filled in the manner provided for original appointments for the unexpired term of the position so made vacant. No person shall be appointed chief inspector of mines unless he is possessed of competent knowledge of chemistry, the geology of Ohio, mineralogy, in so far as those sciences relate to mining, and has a practical knowledge of mining engineering, and different systems of working and ventilating mines, the nature and properties of the noxious and poisonous gases of mines, particularly fire damp, and of the best means of preventing and removing the same; and no person shall be appointed district inspector of mines unless he be a full miner of at least five years' experience, and a resident of the district for which he is appointed, for at least one year, and is possessed of a practical knowledge of the mode of working and ventilating mines, of the means of detecting the presence of bad or foul air, noxious and poisonous gases, and of the best means of preventing and removing the same.

Appointment of chief and district inspectors; who eligible.

SEC. 290a. That authority be and is hereby given to appoint two additional district inspectors of mines; and they shall be appointed in the same manner and possess the same qualifications and receive the same compensation as the five district inspectors of mines authorized by said Sec. 290. The term of office of the two district inspectors of mines so provided for shall be three years, and they shall take and give bond, as provided in Sec. 291 of the Revised Statutes of Ohio, and shall be subject to the regulations and requirements of the district inspectors authorized by Sec. 290, as provided in chapter nine of the Revised Statutes of Ohio. The chief inspector of mines shall appoint additional inspectors for service in districts to be

Additional district inspectors.

designated by him, and he is authorized to divide the in seven districts, in each of which one of the district inspectors of mines shall reside.

Bond and oath.

SEC. 291. Before entering upon the discharge of duties of their respective offices, the chief inspector and district inspectors shall give bond to the state, the former the sum of five thousand dollars, and the latter in the sum of two thousand dollars each, to be approved by the governor conditioned for the faithful performance of their duties respectively; said bonds, with an oath of office on each, approval of the governor indorsed thereon, shall be forthwith deposited with the secretary of state; the inspectors while in office, shall not act as agent, manager or mine engineer for any operator, or in any way be interested in operating any mine.

Their powers and duties.

SEC. 292. The chief inspector and district inspectors shall give their whole time and attention to the duties of their offices, respectively; it shall be the duty of the district inspectors to examine all the mines in their respective districts as often as possible, to see that all the provisions and requirements of this chapter are strictly observed and carried out; they shall particularly examine the work and machinery belonging to any mine, examine into the condition of the mines as to ventilation, circulation and condition of air, drainage and general security; they shall make a record of all examinations of mines in their respective districts, showing the date when made, the conditions in which the mines are found, the extent to which the laws relating to mines and mining are observed or violated, the progress made in the improvement and security of life and health sought to be secured by the provisions of this chapter, the number of accidents, injuries received, or deaths in or about the mines, the number of mines in their respective districts, the number of persons employed in or about each mine, together with all such other facts and information of interest concerning the condition of mines, development and progress of mining in their respective districts, as they may think useful and proper, which record shall, on or before the first Monday of every month, be filed in the office of the chief inspector, to be by him recorded, and so far thereof as may be of public interest, to be included in the annual report; in case of any controversy or disagreement between the district inspector and the owner and operator of any mine, or the person working therein, or in case of conditions of emergencies requiring counsel, the district inspector may call on the chief inspector for such assistance and counsel as may be necessary; should the district inspector find any of the provisions of this chapter violated or not complied with, by any owner, lessee, or agent in charge of any mine, he shall immediately notify such owner, or agent in charge, of such neglect or violation, and the same is, within a reasonable time, rectified, and the provisions of this chapter fully complied with, he shall institute a prosecution under the provisions of section

ousand eight hundred and seventy-one (6871) of the Revised Statutes. The inspectors shall exercise a sound discretion in the enforcement of the provisions of this act, and in any respect (which is not provided against by, or may result from a rigid enforcement of any express provisions of this chapter), the inspector find any matter, thing or practice in or connected with any such mine, to be dangerous or defective, so as, in his opinion, to threaten or tend to cause bodily injury of any person, the inspector may give notice in writing thereof to the owner, agent or manager of the mine, and shall state in such notice the particulars in which he considers such mine, or any part thereof, or any matter, thing or practice to be dangerous or defective, and require the same to be remedied. For the purpose of making the inspection and examination provided for in this section, the chief inspector and the district inspectors shall have the right to enter any mine at all reasonable times, by night or by day, but in such manner as shall not necessarily obstruct the working of the mine; and the owner or agent of such mine is hereby required to furnish the means necessary for such entry and inspection; the inspection and examination herein provided for shall extend to fire clay, iron ore and other mines, as well as coal mines.

SEC. 293. The chief inspector shall designate the counties or portions thereof in the state which shall compose the different districts, and may at any time change the same. He may, in his judgment the best interests of the service may require, and shall issue such instructions, make such rules and regulations for the government of the district inspectors, not inconsistent with the powers and duties vested in them by law, as shall secure uniformity of action and proceedings throughout the different districts; and he may order one district inspector to the assistance of any other district inspector, or make temporary transfers of district inspectors, when, in his judgment, the efficiency or necessity of the service demands or permits, and he may, with the consent of the governor, remove any district inspector at pleasure; the district inspectors are hereby invested with all the powers and authority of county auditors, as sealers of weights and measures in the different counties of this state, and for any service performed as such sealers they shall receive the same compensation as now provided by section ten hundred and sixty-two (1062) of the Revised Statutes; but said inspector shall exercise said authority in connection with weights and measures only at mines in their respective districts; the chief inspector shall render such personal assistance to the district inspectors as they, from time to time, may require, and shall make such personal inspection of the mines as he may deem necessary, and his other duties will be as he shall keep in his office and carefully preserve all maps, surveys and other reports and papers required by law to be filed with him, and so arrange and preserve the same as to make them a permanent record of ready, convenient and connected reference; he shall compile and consolidate

District, how made and changed.

Rules for district inspectors.

Power of chief over district inspectors.

Their powers as sealers of weights and measures.

Special duties of chief inspector.

His reports.

Mining operators to make certain report to him.

Penalty for their failure to make such reports.

Matters to be included in report of chief inspector.

Maps, plans of mines, etc., shall be kept in offices.

Salaries.

the reports of district inspectors, and annually make to the governor of all his proceedings, as well as those of the district inspectors, the condition and operation of the different mines of the state, and the number of mines and the number of persons employed in or about such mines, the amount of coal, iron ore, limestone, fire clay, or other mineral mined in the state; and for the purpose of enabling him to make such report, the owner, lessee or agent in charge of such mine, who is engaged in mining, the owner, lessee or agent of any firm, company or corporation in charge of any fire clay, or iron ore mined [mine?] limestone, or quarry, or who is engaged in mining or conducting any mineral whatsoever in this state, shall before the 31st day of January in every year, send to the office of the chief inspector of mines, upon blanks furnished by him, a correct return specifying with respect to the preceding 31st day of December, the quantity of coal, iron ore, fire clay, limestone, or other mineral produced in such mine or quarry, and the number of persons ordinarily employed in or about such mine, or quarry and above ground, distinguishing the persons employed below ground and above ground. Every owner, lessee or agent of a mine or quarry who fails to comply with this section, or makes and return which to his knowledge is untrue in any particular, shall be deemed guilty of an offence against this section, and shall be fined one hundred dollars to be recovered at the suit of the chief inspector in the courts of the state of Ohio; he shall also include in such return such facts relative to the mineral resources of the state and the development of the same, as shall, in his judgment, be of public interest; he shall enumerate all accidents which have occurred in the manner in which they occurred, in or about the mine, and give all such other information as he thinks useful and proper, and make such suggestions as he deems important relative to mines and mining, and any other legislation that may be necessary on the subject for the better regulation of the life and health of those engaged in the mining industry.

Sec. 204. The chief inspector shall have an office in the state house, in which shall be carefully kept the maps and plans of all mines in the state, and all records, correspondence, papers, and apparatus and property relating to his duties, belonging to the state, and shall be handed over to his successor in office; the district inspectors shall keep their offices in such place in their respective districts as will be most central and convenient to the mining region of their respective districts, and shall keep and preserve in their offices all maps, plans, surveys and other papers belonging to their offices, in such manner as shall be of easy access and convenient reference to the public, and be entitled to examine them. The district inspectors shall receive an annual salary of twelve hundred dollars per annum, and the chief inspector shall receive the same salary as is now provided for inspector of mine

on twelve hundred and eighty-four of the Revised
utes

SEC. 295. There shall be provided for the inspectors
ghts and measures and all instruments and chemical tests
ssary for the discharge of their respective duties under
chapter which shall be paid for on the certificate of the
f inspector, from his contingent fund, and shall belong
ie state.

Instruments,
etc., to be
furnished in-
spectors.

SEC. 295a. It shall be unlawful for any mine owner,
e or operator of coal mines in this state, employing
rs at bushel or ton rates, or other quantity, to pass the
it of coal mined by said miners over any screen or other
e which shall take any part from the value thereof,
e the same shall have been weighed and duly credited
e employe sending the same to the surface, and ac-
ed for at the legal rate of weights as fixed by laws of

Unlawful to
screen coal
before weigh-
ing.

SEC. 295b. The provisions of this act shall also apply to
ass of workers, engaged in mines wherein the mining
ie by machinery, known as loaders; whenever the work-
are under contract to load by the bushel, ton or any
ity, the settlement of which is had by weight, the out-
hall be weighed in accordance with the provisions of
ct.

Provisions
apply to
"loaders."

SEC. 295c. Any mine owner, lessee or operator of coal
in this state, neglecting or refusing to comply with
onditions required to be performed by sections 295a
295b, shall be deemed guilty of a misdemeanor, and upon
ction, be fined in any sum not exceeding six hundred
y) dollars, nor less than three hundred (\$300) dollars,
discretion of the court.

Penalty.

SEC. 296. The owner or agent of any mine having an
ation of not less than fifteen thousand cubic yards,
nake, or cause to be made, an accurate map or plan of
rking of such mine on a scale of not less than two hun-
ect to the inch, showing the area mined or excavated,
ie location and connection with such excavation of the
of the lines of all adjoining lands, and the name or
of each owner or owners, so far as known, marked on
ract, and the owner or agent shall annually thereafter
or cause to be made, an addition to said map, showing
ogress and plan of the working of such mine during
vious year up to the date of survey; provided, that
dditions shall be made semi-annually whenever the
nspector deems it necessary and so directs. The map
e kept at the office of such mine, and open to the in-
n of the mine inspector, or his assistants, at all rea-
e times, and at the request of the inspector the owner
nt shall file a correct copy of such map with said mine
or at Columbus, and in case of refusal on the part of
ner or agent to make and file such map, the inspector
orized and required hereby to cause such map or
o be made in duplicate, at the expense of said owner
it, the cost of which shall be recoverable against the

Owner of a
mine shall
furnish a map
of his mine,
etc.

Inspector to
cause maps to
be made.

Additions
made semi-
annually.

Cause maps to
be made in
duplicate.

Maps of abandoned mines to be made.

Shall have attached sworn certificates.

Outlets required.

Not apply to new openings.

Does not apply unless more than 20 men are employed.

Cages fitted with safe appliances.

owner or agent in the name of the state mine inspector; and in case of refusal by said owner or agent to make, or cause such map and the additions thereto to be made, for sixty days after notice by the mine inspector, said agent or owner shall be liable to a fine of five dollars for each and every day until said map is made, which shall be collected in the name of the state of Ohio, at the suit of the state mine inspector, and the amount so recovered shall be paid into the township school fund of the township when collected. And when any mine is exhausted or abandoned, and before the pillars are drawn in any portion of the mine, the owner or agent thereof shall cause to be made a correct map of such mine, showing the area and working of the same to the day of abandoning, or of drawing pillars for the purpose of abandoning, and file such map within ninety days thereafter at the office of the county recorder in the county where such mine is located; said map shall have attached thereto the sworn certificate of the mining engineer making the map, and of the mine boss in charge of the underground workings of said mine; such map shall be properly labeled and filed by the recorder, and be preserved as a part of the records of the land on which such mines are located, and the recorder shall receive for said filing from said owner or agent a fee of fifty cents.

Sec. 207. It is unlawful for the owner or agent of any coal mine, worked by shaft, to employ or permit any person to work therein, unless there are, to every seam of coal worked in each mine, at least two separate outlets, separated by natural strata of not less than one hundred feet in breadth, by which shafts or outlets distinct means of ingress and egress are always available to the persons employed in the mine; but it is not necessary for the two outlets to belong to the same mine if the persons employed therein have safe ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine while being worked for the purpose of making communication between said two outlets so long as not more than twenty persons are employed at any one time in such mine, neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages, and other means of egress shall at all times be available for the persons employed, where there is no second outlet. The escapement shafts shall be fitted with safe and available appliances, by which the persons employed in the mine may readily escape in case an accident occurs deranging the hoisting machinery at the main outlets, and such means or appliances for escape shall always be kept in a safe condition; and in no case shall an air shaft, with a ventilating furnace at the bottom be construed to be an escapement shaft, within the mean-

of this section. To all other coal mines, whether slopes or drifts, two such openings or outlets must be provided within twelve months after shipments of coal have commenced from such mine; and in case such outlets are not provided as herein stipulated it shall not be lawful for the agent or owner of such slope or drift to permit more than ten persons to work therein at any one time. In case a coal mine has but one shaft, slope or drift, for the ingress or egress of the men working therein, and the owner thereof does not own suitable surface ground for another opening, he may select and appropriate any adjoining land for that purpose, and may make an additional shaft or outlet under, through or upon any intervening land, or land adjoining, and shall be governed in his proceeding in appropriating such land by the provisions of law in force, providing for the appropriation of private property by corporations, and such appropriation may be made, whether he is a corporator or not; but no land shall be appropriated, under the provisions of this chapter until the court is satisfied that suitable premises can not be obtained upon reasonable terms.

Slopes and drifts must be provided within twelve months.

When owner does not own suitable ground.

SEC. 298. The owner or agent of every coal mine, whether shaft, slope or drift, shall provide and maintain for every such mine an amount of ventilation of not less than 10 cubic feet, per minute, per person employed in such mine, which shall be circulated and distributed throughout the mine in such a manner as to dilute, render harmless and dispel the poisonous and noxious gases from each and every working place in the mine, and no working place shall be driven more than sixty feet in advance of a breakthrough, air-way; and all breakthroughs, or air-ways, except those not made near the working-faces of the mine, shall be closed and made air-tight, by brattice, trap doors, or otherwise, so that the currents of air in circulation in the mine may reach to the interior of the mine, where the persons employed in such mine are at work, and all mines governed by this statute shall be provided with artificial means of production of ventilation, such as forcing, or suction fans, exhaust fans, furnaces or other contrivances, of such capacity and power as to produce and maintain an abundant supply of air, and all mines generating fire-damp shall be kept free from standing gas and every working place shall be carefully examined every morning with a safety lamp, by a competent person or persons, before any of the workmen are allowed to enter the mine. All underground entrances and places not in actual course of working or extension shall be properly fenced across the whole width of such entrances so as to prevent persons from inadvertently entering the same.

Ventilation.

Shall not drive working place more than 60 feet in advance of breakthrough.

Working places examined every morning.

SEC. 299. The owner or agent of every coal mine entered by shaft, in all cases where the human voice can be distinctly heard, shall forthwith provide and maintain a metal tube from the top to the bottom of such shaft, properly calculated for the free passage of sound therein, so that conversation may be held between persons at the bot-

Safety apparatus and precautions.

Cover over-
head of cages.

tom and top of the shaft; there shall also be provided an approved safety-catch, and a sufficient cover overhead, on carriages used for lowering and hoisting persons, and in top of every shaft an approved safety-gate, and an adequate brake shall be attached to every drum or machine used for lowering or raising persons in all shafts or slopes; and there shall also be provided in every shaft a traveling or passing way from one side of a shaft bottom to the other, so that persons working therein may not have to pass under descending cages; and all slopes or engine planes, used as traveling ways by persons in any mine, shall be made of sufficient width to permit persons to pass moving cars safely; but if found impracticable to make any slope or engine plane of sufficient width, then safety holes of adequate dimensions, and not more than sixty feet apart, shall be made on one side of said slope or engine plane. These safety holes shall always be kept free from obstruction, and the roof and sides shall be made secure. The buildings used for generating steam, and the buildings containing boilers shall not be nearer than sixty feet to any shaft or slope, or to any building or inflammable structure coming within or surrounding said shaft or slope; but this section shall not apply to any shaft or slope until the work of development and shipment of coal has commenced.

Boilers not
nearer than 60
feet to any
shaft or slope.

Competent
engineers
must be em-
ployed, etc.

SEC. 300. No owner or agent of any coal mine operated by a shaft or slope shall place in charge of any engine used for lowering into or hoisting out of such mine persons employed therein, any but experienced, competent and skilled engineers; and no engineer in charge of such engine shall allow any person, except such as may be deputed for that purpose, by the owner or agent, to interfere with it or any part of the machinery, and no person shall interfere in any way intimidate the engineer in the discharge of his duties; and in no case shall more than ten men ride on any cage or car at one time, and no person shall ride on a loaded cage or car in any shaft or slope.

Safety lamps
the property
of mine
owner.

Lighting and
ventilation.

Main doors
shall have an
attendant.

Mine boss
shall measure
the air once a
week.

Notice of ac-
cidents.

SEC. 301. All safety lamps used for examining mines, or which are used in any coal mine, shall be the property of the owner of the mine, and shall be under the charge of the agent thereof, and in all mines, whether they generate fire-damp or not, the doors used in assisting directing ventilation of the mine, shall be so hung or fastened that they will shut of their own accord and remain closed; and all main doors shall have an attendant whose constant duty shall be to open them for transportation and travel, and prevent them from standing open when it is necessary for persons or cars to pass through them; and the mining boss shall keep a careful watch over the ventilating apparatus and the air-way, and he shall measure the ventilation at least once a week, at the inlet and outlet of the mine, and at or near the face of all entries, and the measurements of air so made shall be noted on blanks, furnished by the chief inspector; and on the first day of each month the mining boss of each mine shall sign one of such blanks.

perly filled with the said actual measurements, and forward the same to the chief inspector, and any mining boss giving false returns of such air measurements shall be held guilty of an offense against this section. Every person having charge of any mine, whenever loss of life occurs by accident, connected with the working of such mine, or by explosion, shall give notice thereof forthwith, by mail or otherwise, to the inspector of mines, and to the coroner of the county in which such mine is situated, and the coroner shall hold an inquest upon the body of the person or persons whose death has been caused, and inquire fully into the cause thereof, and shall return a copy of findings and all the testimony to the chief inspector. The owner, agent, or manager of every mine shall, within twenty-four hours next after any accident or explosion, whereby loss of life or personal injury may have been occasioned, send notice in writing to the chief inspector, and specify in such notice the character and cause of the accident, and the name or names of the persons killed and injured, with the extent and nature of the injuries sustained. In any personal injury, of which notice is required to be sent under this section, results in the death of the person injured, notice in writing shall be sent to the chief inspector in twenty-four hours after such death comes to the knowledge of the owner, agent or manager; and when loss of life occurs in any mine by explosion, or accident, the owner, agent, or manager of such mine, shall notify the chief inspector, or the district inspector forthwith, of the fact and all be the duty of the chief inspector to go himself, or require one of the district inspectors to go, at once to the mine in which said death occurred, and inquire into the cause of the same, and to make a written report, fully setting forth the condition of the part of the mine where such death occurred, and the cause which led to the same; which report shall be filed by the chief inspector in his office as a matter of record, and for future reference.

Shall give notice to the chief inspector and the coroner.

Coroner shall hold inquest.

Duty of inspectors.

Notice when loss of life occurs.

For any injury to persons or property, occasioned by violation of this act, or any willful failure to comply with its provisions by any owner, agent or manager of any mine, a right of action shall accrue to the party injured, for the direct damage he may have sustained thereby; and, in case of loss of life, by reason of such willful neglect or default, aforesaid, a right of action shall accrue to the widow and next heirs of the person whose life shall be lost, for recovery of damages for the injury they have sustained. The owner, agent, or manager of any mine shall also give notice to the chief inspector of mines in any or all of the following cases:

Penalty.

Right of action to party injured.

Other notices to be given chief inspector of mines.

Where any change occurs in the name of any mine, the name of any owner, agent, or manager of any mine, or the officers of any incorporated company which owns and operates a mine.

2. Where any working is commenced for the purpose of opening a new shaft, slope or mine, to which this applies.

3. Where any mine is abandoned or the work thereof discontinued.

4. Where the working of any mine is recommenced after any abandonment or discontinuance for a period exceeding three months.

5. Where the pillars of a mine are about to be removed or robbed.

6. Where a squeeze or crush, or any other cause change may seem to affect the safety of persons employed in any mine, or where fire occurs, or a dangerous body of gas is found in any mine.

SEC. 302. No child under fifteen years of age shall be allowed to work in any mine, and in all cases of minors employed for work the agent of such mine shall see that the provisions of this section are not violated; he shall also keep a record of all minors employed by him, or by any person employed in said mine, giving the name, age, place of birth, parents' name and residence, with character of employment, and he shall demand from such minor proof that he has complied with the requirements of the school laws; and he shall be the duty of the mine inspector to inspect such records and to report to the chief inspector of mines the number of minors employed in or about such mines and to enforce the provisions of this section.

Action for non-compliance with statutes.

SEC. 303. In case any coal mines does not, in applying for the safety of the persons working therein, conform to the provisions of this chapter, or the owner or agent disregards the requirements of this chapter, any court of competent jurisdiction may on application of the inspector bring a civil action in the name of the state, enjoin or restrain the owner or agent from working or operating such mine until it is made to conform with the provisions of this chapter, and such remedy shall be cumulative, and shall not take the place of or affect any other proceedings against the owner or agent authorized by law for the matter complained of in such action.

When governor shall convene a board of examiners.

SEC. 304. When written charges of gross neglect of duty or malfeasance in office against any inspector is made and filed with the governor, signed by not less than five coal miners or one or more operators of mines, together with a bond in the sum of five hundred dollars, payable to the state, and signed by two or more responsible freeholders and conditioned for the payment of all costs and expenses arising from the investigation of such charges, the governor shall convene a board of examiners, to consist of two practical coal miners, one chemist, one mining engineer and one operator, at such time and place as he deems best, giving five days' notice to the inspector against whom the charges are made, and also the person whose name appears first in the charges; and the board when so convened, and having first duly sworn, truly to try and decide the charges.

Denies to the board.

shall summon any witnesses so desired by either party, and examine them on oath, which may be administered by any member of the board, and depositions may be read on such examination, as in other cases; and the board shall examine into the truth of such charges, and report the result of their investigation to the governor; and the board shall bear the costs and expenses of such investigation against the inspectors or the persons signing the bond according to their finding, against said inspector or in his favor, which costs and expenses shall include the compensation of such board, of five dollars per day for each member, for the time occupied in the trial and in traveling from and to their homes; and the attorney general shall forthwith proceed to collect such costs and expenses, and pay the same into the state treasury, being in the first instance paid out of the state treasury on the certificate of the president of such board.

SEC. 305. In all coal mines in the state the miners employed and working therein, the owners of the land or other persons interested in the rental or royalty of any such mine, shall at all proper times have full right of access and examination of all scales, machinery or apparatus used in or about such mine to determine the quantity of coal mined, for the purpose of testing the accuracy and correctness of such scales, machinery or apparatus; and such miners, landowners or other persons may designate or appoint a competent person to act for them, who shall at all proper times have full right of access and examination of such scales, machinery or apparatus, and sealing all weights and measures of coal mined, and the accounts kept of the same; no more than one person on behalf of the miners collectively, or one person on behalf of the landowners or other persons interested in the rental or royalty jointly, shall have the right of access, examination and inspection of scales, weights, measures and accounts at the same time, and that no person shall make no unnecessary interference with the use of such scales, machinery or apparatus; and the miners employed in any mine may, from time to time, appoint two of their number to act as a committee to inspect, oftener than once in every month, the mine and the machinery connected therewith, and to measure the ventilating current, and if the owner, agent or manager so desires, may accompany said committee by himself or two or more persons which he may appoint for that purpose; the owner, agent or manager shall afford every necessary facility for making such inspection and measurement, but the committee shall not in any way interrupt or impede the work going on in the mine at the time of such inspection and measurement, and said committee shall, within ten days after such inspection and measurement, make a correct report of the same to the inspector of mines, on blanks to be furnished by said inspector for that purpose; and if such committee shall report to the inspector a false or untrue report of the mines, such act shall constitute a violation of this section.

Right of access to mines, etc.

Right to test the accuracy of the scales.

Miners to appoint a committee to inspect mine and machinery, etc.

Committee to report to the inspector.

SEC. 306. Only a pure animal or vegetable oil, or oil as free from smoke as a pure animal or vegetable oil, not the product or by-product of rosin, and which shall, on inspection, comply with the following test, shall be used for illuminating purposes in the mines of this state: All oil must be tested at sixty degrees Fahrenheit. The specific gravity of the oil must not exceed twenty-four degrees Tagliabue. The test of oil must be made in a glass jar or five-tenths inches in diameter by seven inches in depth. If the oil to be tested is below forty-five degrees Fahrenheit temperature, it must be heated until it reaches about sixty degrees Fahrenheit; and should the oil be above sixty degrees and below sixty degrees Fahrenheit it must be cooled to a temperature of about seventy degrees Fahrenheit, after being well shaken, it should be allowed to cool naturally to a temperature of sixty degrees Fahrenheit, and finally being tested. In testing the gravity of the oil, the Tagliabue hydrometer must be, when possible, read from the bottom, and the last line which appears under the surface of the oil shall be regarded as the true reading. In case the oil under test should be opaque or turbid, one-half of the correction shall be deemed and taken to be the true reading. Where the oil is tested under difficult circumstances, an allowance of one-half degree may be made for possible error of parallax before condemning the oil for use in the mines. Oil sold to be used for illuminating purposes in the mines of this state, shall be contained in barrels or packages conspicuously marked with the name of the dealer, the specific gravity of the oil, and the date of shipment.

SECTION 2. That section 306 be supplemented by the enactment of the following section, numbered as indicated.

SEC. 306a. Any person or persons, firm or corporation, which ships any oil contained in any barrel or box or package or packages, which are not branded as prescribed in section 306, said oil to be used for illuminating purposes in coal or any other mines, and any person or persons, firm or corporation which sells any oil other than that prescribed in section 306, to be used for illuminating purposes in coal or other mines, and any person or persons, firm or corporation, having in charge the operation or running of any mine, which, in a mine under his or its charge uses or permits the use of any oil other than that prescribed in section 306, or any miner or mine employee who uses, with a knowledge of its character, in any mine in this state, any oil other than that prescribed in section 306, shall be fined not less than nor more than fifty dollars; and any individual, firm, company or corporation which sells any oil other than that prescribed in section 306, in a quantity exceeding five barrels at one sale, to be used for illuminating purposes, in coal or other mines, shall be fined not less than twenty-five nor more than one hundred dollars. Mayors and justices of the peace shall have jurisdiction to try any violations of this section, and their judgment shall be final. Every person who

being once convicted of violating this section, shall be convicted of again violating any of the provisions of this section, may, in addition to the fine before provided, be imprisoned not less than ten days nor more than thirty days. On complaint, before a mayor or justice of the peace, of a second violation of this act involving the punishment of imprisonment, if a trial by jury be not waived, a jury shall be chosen and the case tried, after the manner provided in section 3718a of the Revised Statutes. All fines assessed and collected under prosecutions begun, or caused to be begun by the chief inspector of mines, or any district inspector of mines, shall be paid by the court to the chief inspector of mines, and by him paid into the state treasury to the credit of a fund which is hereby appropriated for the use of the chief inspector of mines in prosecuting violations of this section. Any excess of fines collected over the expenses incurred in prosecutions under this section remaining at the close of the fiscal year, shall be credited to the general revenue fund of the state.

SECTION 3. Section 306, as amended March 29, 1892, 89 O. L., 164), is hereby repealed, and this act shall take effect and be in force from and after its passage.

SEC. 6871. Whoever knowingly violates any of the provisions of sections two hundred and ninety-seven, two hundred and ninety-eight, two hundred and ninety-nine, three hundred, three hundred and one, three hundred and two, and three hundred and five, or does any act whereby the life or health of the persons, or the security of any mine and machinery are endangered; or any miner or other person employed in any mine governed by this statute, who intentionally and willfully neglects or refuses to securely prop the roof of any working place under his control; or neglects or refuses to obey any order given by the superintendent of mine in relation to the security of the mine in the part of the roof where he is at work, or for fifteen feet back from the face of his working place; or any miner, workman, or other person who shall knowingly injure any water-gauge, barometer, air-course or brattice, or shall obstruct or throw down any air-ways, or shall handle or disturb any part of the machinery of the hoisting engine, or open a door of the mine and not have the same closed again, whereby danger is produced either to the mine or those that work therein; or who shall enter any part of the mine against caution; or who shall disobey any order given in pursuance of this act; or who shall commit any wilful act, whereby the lives and health of persons working in the mine, or the security of the mine, or the safety thereof, is endangered; or any person having charge of a mine, whenever loss of life occurs by accident connected with the working of such mine, or by explosion, who neglects or refuses to give notice thereof forthwith, by mail or otherwise, to the chief inspector of mines, and to the coroner of the county in which such mine is situate; or any such coroner neglects or refuses to hold an inquest upon the body of

Mines; penalty for injuring.

Penalty for neglecting to securely prop the roof.

Penalty for disturbing machinery.

Penalty for neglecting to notify coroner or chief inspector.

To supply
timber.

the person whose death has been thus caused, and return a copy of his findings and all the testimony to the inspector. The owner shall be fined not less than fifty dollars, or imprisoned in the county jail not more than thirty days, or both. The owner, agent, or operator of every coal mine shall keep a supply of timber constantly on hand, and shall deliver the same to the working place of the miner, and no miner shall be held responsible for accidents which may occur in mines where the provisions of this section have not been complied with by the owner, agent, or operator thereof.

AN ACT

For regulating the weighing of coal at the mine where mined.

Weighing of
coal; oath of
weighmaster.

SECTION 1. Be it enacted by the general assembly of the State of Ohio, That whoever shall be employed to weigh coal as it comes from the mine where mined, where such weight shall be the weight upon which the amount of mining for the person mining such coal shall be estimated, and the weight upon which the royalty due the owner of the lands from which such coal shall be mined, shall be estimated at any mine where ten or more miners shall be employed, shall take and subscribe an oath before a competent officer to administer such oath, that he will directly weigh all coal taken from such mine under existing contracts between operator, miner and land owners, give due credit for the same to the miner mining such coal in said mine, and the land owner when required, own the lands from which such coal is mined, and shall enter into bond in the sum of three hundred dollars, with two sufficient sureties and payable to the state of Ohio, said bond to be approved by and filed with the township clerk of the township where such mine may be situated for the faithful discharge of such oath. Such oath to be endorsed upon said bond.

Bond of land-
owner.

Duty of prosecuting attorney.

SEC. 2. It shall be the duty of the prosecuting attorney of the county in which such mine is situated, to prosecute all persons charged with violation of such oath.

Penalty.

SEC. 3. Any person convicted of such violation shall be fined in the sum of not less than fifty dollars, nor more than five hundred dollars, or imprisoned in the county of the county where conviction is had for not less than thirty days nor more than sixty days, or both, at the discretion of the court.

When act
takes effect.

SEC. 4. This act shall take effect and be in force from and after September 1, 1898.

Passed April 21, 1898.

AN ACT

plementary to section 3184 of the Revised Statutes, as amended
March 22, 1891, to be sectionally numbered 3184a.

SEC. 318a. Any person who performs labor in mining, or removing the same from the mines, or other manual or connected therewith, for any coal or mining company, operating or leasing coal mines within this state, in virtue of a contract with the owner, owners, or his or their authorized agent, shall have a lien to secure the payment for the same upon the mine or mines of such company and upon all the rights of the company or corporation owning or leasing such mines, and upon all the personal property of any such company or corporation used in conducting their business of mining coal, whether the same be located at or near the mines or elsewhere.

Lien upon
mines for
labor.

Passed March 27, 1889.

AN ACT

to permit mine and quarry operators to cross roads,' passed
February 17, 1893.

SECTION 1. That any individual, partnership or corporation in Ohio, who may now or hereafter own any land or interest either in fee or otherwise, containing any coal, iron or stone, and over any portion of which shall pass any county or township road or public highway, with the consent of the board of county commissioners in case of county roads, or township trustees in case of township roads, shall have and are hereby authorized to excavate, mine, quarry through or under any such road; provided, however, that before said work shall be commenced, such individual, partnership or corporation shall execute and deliver to the board of county commissioners of any such county, a bond with good and sufficient surety, in such amount as shall be by said board considered sufficient to cover all damages that may accrue by reason of excavating, mining or quarrying through or under any such road, the same to be approved by said board; conditioned that while mining over or mining or quarrying under any such road, the free and unobstructed passage way or road shall be kept open by such individual, partnership or corporation for public use, and as soon as practicable the said road shall be fully restored to its original safe and passable condition.

Conditions
upon which
mine and
quarry opera-
tors permitted
to undermine
or cross public
roads.

SEC. 4374. A person owning land adjoining a mine used for the production of coal, ore, or other mineral substance, or a person having an interest in such mine, having reason to believe that the protection of his interest in the

How owner of
land adjoining
mine may
enter and ex-
amine same.

mine, or in like minerals on his adjoining land, require upon making affidavit to that effect before a justice of the peace or other proper officer, may enter such mine, at an examination or survey made thereof; but such examination or survey shall not be made until one day's notice thereof is given to the parties in interest, nor at unreasonable times, but in such time and in such manner as shall not least interfere with the working of the mine, if the mine is being operated at the time.

Facilities for such examination.

SEC. 4375. When the affidavit has been made and notice given, the person in charge of the mine shall, upon application of the party giving the notice, transmit the ordinary method in use at such mine for entrance and exit, a surveying party of not more than five persons, and furnish to such party a competent guide and supplies, with approved safety lamps; and for every person so employed, he shall be entitled to receive, from the person requesting such survey, the sum of fifty cents, unless the shaft exceeds two hundred and fifty feet in depth, in which case he shall be entitled to the sum of one dollar for each day and five dollars per day for the guide.

Damages sustained by such examination.

SEC. 4376. If the parties working or occupying the mine sustain any damage, for which compensation may be made, by reason of such examination or survey having been made at unreasonable times, or in an improper or warrantable manner, the person making the same, or causing the same to be made, shall be liable therefor.

Penalty for hindering such examination.

SEC. 4377. The parties working or occupying the mine shall not hinder or obstruct the examination or survey, when made at a reasonable time and in a reasonable manner, under a penalty of not less than fifty nor more than five hundred dollars for each offense, to be recovered in a court of competent jurisdiction.

Action for refusal to permit examination.

SEC. 4378. The party who makes the application for the survey may, upon the refusal of the owner or person in charge of the mine to comply with the foregoing provisions, recover judgment, as upon default, in a court of competent jurisdiction, against the owner of such mine, in such sum as such party may declare under oath he believes to be justly due him for coal or other mineral belonging to him, taken by the owner of such mine without his permission, and the statute of limitations shall not be operative against such claim; but the demand and refusal in respect to such mine shall be first proven to the satisfaction of a court or jury, and the refusal of the person in charge of the mine shall be held to be the refusal of the owner.

To whom provisions concerning examination available.

SEC. 4379. The provisions of this chapter shall be available to any person who, on his oath, states that he is the owner or authorized agent of any owner of land which he believes contains coal or other valuable mineral within one mile of such shaft, although it does not contain any mine of the owner of such shaft; the affidavit is

shall be sufficient if it state the lands in which the affiant is interested are in the vicinity of such shaft, and not more than one mile distant therefrom; and service upon any owner or superintendent of such shaft shall be sufficient.

AN ACT

To protect the mines in Ohio and the lives of the persons employed therein.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, It shall be the duty of every owner, agent, or lessee of any land within this state underlaid with mineral stone coal, and of every person, firm, or corporation engaged in drilling or exploring for natural gas or oil upon such land, upon notice from the chief inspector of mines, or from any district inspector of mines, or before abandoning or ceasing to operate any gas or oil wells drilled upon such lands, to make or cause to be made, a complete and accurate map thereof, which shall show the boundaries of each tract of land drilled upon, and the buildings and all monuments found upon such premises. Each well shall be plainly marked by a name, number or letter, and located whenever possible with reference to some well defined and lasting monument, so that its exact location may be easily determined. Such map shall show the depth at which each well pierced each vein of coal, giving the thickness of each strata. On each map shall be a sworn statement of the engineer or surveyor making it, together with a sworn statement of the owner, agent or lessee operating such oil or gas wells, of the owner of such premises, that it is a true and accurate representation of the property; and a copy thereof drawn upon tracing linen, shall be filed in the office of the chief inspector of mines, and be open to inspection at all reasonable times.

SEC. 2. It shall be the duty of every person, firm or corporation owning, or leasing any land underlaid with mineral stone coal, and upon which gas or oil wells have been drilled to, or below any vein or seam of such mineral coal, before proceeding to mine such coal, to make or cause to be made or filed in the office of chief inspector of mines such a map as is described in section 1 of this act.

SEC. 3. Whenever any person, firm or corporation sinks any well for gas or oil on lands upon which coal or other minerals is being mined, and which well passes through any mine, it shall be the duty of the person owning such land, or drilling such well, to drill the hole to a depth of at least ten feet below the vein of coal or other mineral being mined, when such hole shall be cased, and sealed upon the outside of the casing with suitable material

to the level of the coal floor; and each vein of mineral mined, pierced by such well shall be sealed in the manner.

SEC. 4. It shall be the duty of the owner of any or of the owner, or operator of any well drilled for gas thereon, and which in drilling shall have passed through any vein of minable coal, before abandoning, or ceasing to operate any such well, and before drawing the casing from, to seal the same in the manner following: There shall be driven in such well to a depth of at least twenty-five feet below the floor of the lowest coal measure, a round, seasoned wooden plug at least two feet in length, and equal in diameter to the diameter of the well at that point. After the plug has been properly driven, there shall be filled in on top of the same to a depth of at least twenty feet, hydraulic cement and sharp sand, well mixed one part each of the former to two parts of the latter material. Immediately thereafter there shall be driven well down into the center a round, seasoned wooden plug, at least three feet in length, tapering in form and to be of the same diameter at the smaller end as the diameter of the well at the point to which the plug is driven.

Where any gas or oil well passes through any gas or oil bearing rock lying above the coal measures, the owner, agent or lessee thereof, shall, upon abandoning or ceasing to operate such well, drive a dry wooden plug not less than two feet in length, equal in diameter to the diameter of the hole, to a point as near as possible to the top of the vein, on the top of which there shall be filled at least six feet of sediment of drillings, or cement and sand, as the mine inspector shall direct.

SEC. 5. The owner, agent or lessee of any land on which there has been drilled any oil or gas well which has penetrated any vein of coal shall, before abandoning or ceasing to operate, or removing the casing from such well, give due notice in writing to the chief inspector of mines of the fact and designating therein the well to be abandoned; and it shall thereupon be the duty of such chief inspector or of any district inspector, to go at once to such well and require the owner or agent of the land, or the owner, or lessee of such well to plug the well as provided in this act.

In case such well is not plugged in the manner required by law within ten days after the time the chief or district inspector shall have ordered the same done, the chief or district inspector may cause the well to be plugged, and the costs and expenses of such plugging may be recovered from the person, firm or corporation whose duty it is to seal the well in the manner provided for the recovery of penalties by section six of this act.

SEC. 5a. It shall be the duty of every person, firm or corporation before attempting to drill any gas or oil well upon any land underlaid with mineral stone coal, to first make application to the chief inspector of mines for a

therefor, upon blanks to be furnished by him, granting to such person, firm or corporation the right to drill such gas, oil well or wells. Said application must contain an accurate description of the lot or land upon which said gas or oil well is to be drilled, together with such other information and descriptive matter as the chief inspector of mines may require; and for purposes such inspector is hereby authorized and empowered to prepare or cause to be prepared such blanks and forms as he may consider necessary to subserve the purposes of this act.

SEC. 5b. Upon such application being made and signed by the person, firm or corporation desiring such license and the payment of a fee therefor, hereinafter designated, it shall be the duty of such chief inspector of mines to issue to such person, firm or corporation for each and every well so to be drilled, a license granting to them the right to drill such well upon the lot or land so described in such application. Such person, firm or corporation shall pay to such inspector of mines for each license herein provided for, the sum of five dollars, which sum shall be paid to such chief inspector of mines and by him paid to the treasurer of state, to be credited to a fund, a sufficient amount of which is hereby appropriated for the purpose of defraying the expenses of the inspector of oil and gas wells for the sealing of abandoned oil and gas wells in the manner set forth in the several sections of this act.

SEC. 5c. When in the opinion of the chief inspector of mines, it becomes necessary, he may appoint a suitable person or persons to attend upon and witness the plugging and sealing of abandoned gas and oil wells, as provided in this act. A person, firm or corporation desiring to abandon a gas or oil well shall notify said chief inspector of mines of other person appointed by him for such purpose of such date and of the time when said well will be plugged and sealed. It shall then be the duty of such inspector of mines or other person appointed by him, as provided herein, upon receipt of reasonable notice to attend upon and witness the sealing of such well. The person witnessing the sealing of such well shall immediately make report to the chief inspector of mines on blanks provided therefor, giving the date, manner of sealing, names of persons engaged therein, together with the witnesses present at the time of said sealing, and such other information as the chief inspector of mines may require.

SEC. 5d. Such person so appointed to witness the plugging and sealing of abandoned wells for his services shall receive the sum of one dollar and his actual expenses in connection therewith, to be paid out of the fund herein provided, upon a requisition signed by the chief inspector of mines.

SEC. 5e. The chief inspector of mines shall keep a record in his office in which shall be entered a copy of each application for a license, together with the date of issue of license and to whom issued; also the date when each

well was abandoned and sealed, and the names of the persons witnessing such sealing.

SEC. 6. Every person, firm or corporation, failing to comply with any of the provisions of this act, shall be subject to a penalty of not less than one hundred dollars, nor more than one thousand dollars, to be recovered by action in the name of the state, and on collection, paid into the treasury of the state to the credit of a fund which is hereby appropriated for prosecuting violations of this act, to be paid out on requisitions signed by the chief inspector of mines. Such action may be instituted in the court of common pleas of the county wherein any such well is located in Franklin county.

In addition to the penalties herein provided, every person violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction, be fined in sum not less than fifty dollars nor more than five hundred dollars, or be imprisoned not less than ten days nor more than six months, or both.

SEC. 7. This act shall take effect and be in force immediately after its passage.

Passed April 23, 1898.

OIL LAW AS AMENDED.

AN ACT

To amend sections 306-1, 306-2, 306-3, 306-4 and 306-5, and to repeal sections 306-5a, 306-5b, 306-5c, 306-5d, 306-5e, 306-6 of the Revised Statutes of Ohio.

Be it enacted by the General Assembly of the State of Ohio

Inspector of
mines:

SECTION 1. That sections 306-1, 306-2, 306-3, 306-4 and 306-5 of the Revised Statutes of Ohio be amended to read as follows:

Maps of coal,
gas and oil
lands required
to be made;
when.

Sec. 306-1. It shall be the duty of every person, firm or corporation engaged in drilling or exploring for natural gas or oil upon any land from which coal is being mined, upon notice from the chief inspector of mines of the State of Ohio, or from any district inspector of mines of the State, to make or cause to be made, an accurate map thereof which shall show the boundaries of each tract of land drilled upon, and the buildings and all monuments found upon such premises. Each well shall be plainly marked with its name, number or letter, and located whenever possible in reference to some well defined and lasting monument, so that its exact location may be determined. Such map shall contain a sworn statement of the person, firm or corporation operating such oil or gas wells, that it is a true

Wells to be
plainly
marked!

accurate representation of the property; and a copy thereof shall be filed in the office of the chief inspector of mines and be open to inspection at all reasonable times.

Copy to be filed with inspector of mines.

Sec. 306-2. It shall be the duty of every person, firm or corporation leasing any land for coal mining purposes, and upon which gas or oil wells have been drilled to, or below any veins or seams of such mineral coal before proceeding to mine such coal to make, or cause to be made, and filed in the office of the chief inspector of mines such a map as is described in section 306-1 of the Revised Statutes of Ohio.

Maps to be made before beginning operations.

Sec. 306-3. Whenever any person, firm or corporation sinks any well for gas or oil on lands upon which coal or other mineral is being mined, and which well passes through any mine, it shall be the duty of the person drilling such well to drill the hole to a depth of at least ten feet below the vein of coal or other mineral being mined, when such well shall be cased and sealed upon the outside of the casing, with suitable material to the level of the coal floor; and each vein of mineral coal being mined, pierced by such well shall be sealed in same manner.

Casing and sealing of well drilled in coal or other mineral lands.

Sec. 306-4. It shall be the duty of the owner of any well drilled for oil or gas and which in drilling shall have passed through any vein of mineral coal, before abandoning, ceasing to operate such well, and before drawing the plug therefrom, to seal the same in the manner following: There shall be driven in such well to a depth of at least ten feet below the floor of the lowest coal measure a round seasoned wooden plug at least three feet in length and equal in diameter to the diameter of the well at that point, the top of which plug there shall be filled at least seven feet with sediment or drilling, or cement and sand. Where a gas or oil well passes through any gas or oil bearing stratum lying above the coal measure, the owner of said well or his agent, shall, upon abandoning or ceasing to operate such well, drive a dry wooden plug not less than two feet in length, equal in diameter to the diameter of the hole, at a point as near as possible to the top of the coal vein, the top of which plug there shall be filled at least five feet with sediment or drillings, or cement and sand, as the mine inspector shall direct.

Sealing of well on abandonment.

In case such well is not plugged as aforesaid within ten days from the abandonment thereof, the chief inspector of mines, or a district inspector of mines, may cause the well to be plugged, and the costs and expenses of such plugging shall be recovered of the person, firm or corporation whose failure it is to plug the same in the manner provided for the recovery of penalties by section 303-5 of the Revised Statutes of Ohio.

Failure of owner to cause well to be sealed.

Sec. 306-5. Every person, firm or corporation, failing to comply with any of the provisions of this act, shall be subject to a penalty of not less than one hundred dollars, nor more than two hundred dollars, to be recovered by the state, and on collection, paid into the treasury of the state.

Penalty for non compliance, etc.

the treasury of the state to the credit of a fund which is hereby appropriated for prosecuting violations of this act, to be paid out on requisition signed by the chief inspector of mines. Such action may be instituted in the court of common pleas of the county wherein any such well is located, or of Franklin county. In addition to the penalties herein provided, any person violating the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction, be fined in any sum not less than fifty dollars nor more than two hundred, or be imprisoned not less than ten days nor more than thirty days, or both.

Repeals, etc.

SECTION 2. Said original sections 306-1, 306-2, 306-3, 306-4, 306-5, 306-5a, 306-5b, 306-5c, 306-5d, 306-5e, 306-6 of the Revised Statutes of Ohio be and the same are hereby repealed, and this act shall take effect and be in force from and after its passage.

W. S. MCKINNON,

Speaker of the House of Representatives

CARL L. NIPPERT,

President of the Senate

Passed April 3, 1902.

81G

AN ACT

To provide against the payment of wages in scrip, orders, etc., and against selling goods or supplies to employees at excessive prices.

SEC. 7015. It shall be unlawful for any person, firm, company, or corporation to sell, give, deliver, or in any manner issue, directly or indirectly, to any person employed by him or it, in payment of wages due for labor, or as advance on the wages of labor not due, any script, token, draft, check, or other evidence of indebtedness payable or redeemable otherwise than in money; any violations of the provisions of this section shall be punishable by a fine not less than twenty-five nor more than one hundred dollars, or imprisonment of not more than thirty days, or both; and the amount of any scrip, token, check, draft, order, or other evidence of indebtedness, sold, given, delivered, or in any manner issued, in violation of the provisions of this section, shall be recovered in money at the suit of any holder thereof, against the person, firm, company, or corporation selling, giving, delivering, or in any manner issuing the same; and any scrip, token, check, draft, order, or any other evidence of indebtedness issued in violation of the provisions of this section, presented by the holder thereof, shall be taken as prima facie evidence in any court of the guilt or indebtedness of the person, firm, company or corporation selling, giving, delivering, or in any manner issuing the same, and for

purpose of this act, in case of a firm or corporation, the person selling, giving, delivering, or in any manner issuing said scrip, token, check, draft, order or other evidence of indebtedness shall be the defendant to the criminal action, and the firm, company or corporation shall be held as the defendant in the civil action. Nothing in this section shall apply or affect the right of any person, firm, company or corporation from giving orders on any store or business house, or firm in the business or profits of which he has no interest, directly or indirectly.

SEC. 7016. Whoever compels, or in any manner seeks to compel, or attempts to coerce an employe of any person, firm, or corporation to purchase goods or supplies from any particular person, firm or corporation, shall be fined not more than one hundred nor less than twenty dollars, or imprisoned not more than sixty days, or both; and whoever sells goods or supplies of any kind, directly or indirectly, to an employe, or pays the wages of labor of his employes in goods or supplies of any kind, directly, or through the invention of scrip, order, or other evidence of indebtedness, at higher prices than the reasonable or current market value in cash of such goods or supplies, shall be liable to like punishment and penalties above specified and shall in addition thereto, be liable in civil action to the party aggrieved, in double the amount of any charges made for such goods or supplies in excess of the reasonable or current market value in cash, of such goods or supplies.

SEC. 7017. The prosecuting attorney of any county, on complaint made to him of any violation of either of the two preceding sections within his county, shall cause such complaint to be investigated before the grand jury.

AN ACT

to amend "an act to secure prompt payment of wages of certain employes twice in each month," passed March 21, 1887 (vol. 84, page 211).

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the above recited act be so amended to read as follows:

SEC. 1. That every incorporated manufacturing, mining, mercantile, street-railroad, telegraph, telephone, electric, water company, and construction companies, or contractors building railroads, shall pay, in lawful money, or by check, draft or order, payable in lawful money, at sight or demand, on a bank located at a distance not greater than ten miles from the place where said labor was performed, twice in each month, each and every employe engaged in its business, the wages earned by such employe to within ten days of the date of said payment; provided, however, that

Payment of wages of certain employes twice a month.

Retention of
certain
amounts.

if at any time of payment any employe shall be absent from his regular place of labor, he shall be entitled to said payment at any time thereafter, during their regular business hours, upon demand; and provided, further, that said employer may retain at each payment, any amount said employer may order withheld from his or her wages for rent, powder, tools, tool sharpening, or oil due said employer.

[Section 2, as amended March 27 1889.]

SEC. 2. Any corporation mentioned in section 1 of this act, violating any provisions of this act, shall be punished by a fine not exceeding one hundred nor less than fifty dollars. Justices of the peace, mayors and police judges shall have final jurisdiction in all cases arising under the provisions of this act; and a corporation shall be notified by warrant to be served upon the president, secretary, treasurer, or managing agent thereof; provided, that the defendant shall be entitled, on demand, to a trial by jury. If such prosecution be before a justice of the peace, and a trial by jury be not waived, the said justice shall issue a venire to any constable of the county, containing the names of sixteen electors of the county, to serve as jurors to try such case, and make due return thereof. Each party shall be entitled to two peremptory challenges, and shall be subject to the same challenges as jurors are subject to in criminal cases in the court of common pleas. If the venire of sixteen names be exhausted without obtaining the required number to fill the panel, the justice may direct the constable to summon any of the bystanders to act as jurors; but costs shall not be required to be advanced or paid by a person or an officer authorized or required by statute to prosecute such cases; and if the defendant be acquitted, or if he be convicted, and committed to jail in default of payment of fine and costs, the justice, mayor, or police judge, before whom the case was brought, shall certify such costs to the county auditor, who shall examine, and, if necessary, correct the account, and issue his warrant to the county treasurer in favor of the respective officers to whom costs are due for the amount due to each; provided, complaint for such violation is made within thirty days from the date thereof; providing that in pursuance of and under this act there shall not be more than one conviction of the same corporation during any two weeks. And it shall be the duty of the inspector of shops and factories, on complaint of three or more employes of such corporation to enforce the provisions of this act.

AN ACT

authorize the creation and to provide for the operation of tribunals of voluntary arbitration to adjust industrial disputes between employers and employed.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the court of common pleas of each county, or a judge thereof in vacation, shall have the power, upon the presentation of the petition, or of the agreement hereinafter named, it shall be the duty of said court, or judge thereof in vacation, to issue, in the form hereinafter named, a license or authority for the establishment within each county of tribunals for voluntary arbitration and settlement of trade disputes between employers and employed in the manufacturing, mechanical, or mining industries.

SEC. 2. That said petition or agreement shall be substantially in the form hereinafter given, and the petitions shall be signed by at least forty persons employed as workmen and by four or more separate firms, individuals, or corporations within the county, or by at least four employers, each of whom shall employ at least ten workmen, or by the representative of a firm, corporation, or individual employing not less than forty men in their trade or industry; provided, that at the time the petition is presented, the judge before whom said petition is presented, may, upon motion, require testimony to be taken as to the representative character of said petitioners, and if it appears that the said petitioners do not represent the will of a majority, or at least one-half of each party to the dispute, the license for the establishment of the said tribunal may be denied, or may be such other order in this behalf, as to him shall seem just to both sides.

SEC. 3. If the said petition shall be signed by the requisite number of both employers and workmen, and be in proper form and contain the names of the persons to compose the tribunal, being an equal number of employers and workmen, the judge shall forthwith cause to be issued a license substantially in the form hereinafter given, authorizing the existence of such tribunal and fixing the time and place of the first meeting thereof, and an entry of the license granted shall be made upon the journal of the court of common pleas of the county in which the petition originated.

SEC. 4. Said tribunal shall continue in existence for one year from the date of the license creating it, and may exercise jurisdiction of any dispute between employers and workmen, in any mechanical, manufacturing, or mining industry or business, who shall have petitioned for the tribunal or have been represented in the petition therefor, or who shall submit their disputes in writing to such tribunal for arbitration. Vacancies occurring in the membership of the tribunal shall be filled by the judge or court that licensed

said tribunal, from three names presented by the members of the tribunal remaining of that class in which the vacancies occur. The removal of any member to an adjoining county shall not cause a vacancy in either the tribunal or the post of umpire. Disputes occurring in one county may be referred to a tribunal already existing in an adjoining county.

The place of umpire in any of said tribunals and vacancies occurring in such place, shall only be filled by the mutual choice of the whole of the representatives of both employers and workmen constituting the tribunal, immediately upon the organization of the same. The umpire shall be called upon to act after disagreement is manifested in the tribunal by failure during three meetings held and full discussion had. His award shall be final and conclusive upon such matters only as are submitted to him in writing and signed by the whole of the members of the tribunal, or by parties submitting the same.

Sec. 5. The said tribunal shall consist of not less than two employers or their representatives and two workmen. The exact number which shall in each case constitute the tribunal shall be inserted in the petition or agreement, and they shall be named in the license issued. The said tribunal when convened, shall be organized by the selection of one of their number as chairman and one as secretary, who shall be chosen by a majority of the members, or if such majority cannot be had after two votes then by secret ballot, or by lot, as they prefer.

Sec. 6. The members of the tribunal shall receive no compensation for their services from the city or county, but the expenses of the tribunal, other than fuel, light, and the use of the room and furniture, may be paid by voluntary subscription, which the tribunal is authorized to receive and expend for such purposes. The sessions of such tribunals shall be held at the county seat of the county where the petition for the same was presented, and a room in the courthouse for the use of said tribunal shall be provided by the county commissioners.

Sec. 7. When no umpire is acting, the chairman of the tribunal shall have power to administer oaths to all witnesses who may be produced, and a majority of said tribunal may provide for the examination and investigation of books, documents and accounts pertaining to the matters in hearing before the tribunal, and belonging to either party to the dispute; provided, that the tribunal may unanimously direct that instead of producing books, papers and accounts before the tribunal an accountant, agreed upon by the entire tribunal, may be appointed to examine such books, papers and accounts, and such accountant shall be sworn to well and to examine such books, documents and accounts, as may be presented to him, and to report the results of such examination in writing to said tribunal. Before such examination the information desired and required by the tribunal shall be stated in writing and presented to said accountant, which statement shall be signed by the members of said

bunal, or by a majority of each class thereof. Attorneys at law or other agents of either party to the dispute shall not be permitted to appear or take part in any of the proceedings of the tribunal, or before the umpire.

SEC. 8. When the umpire is acting he shall preside, and he shall have all the powers of the chairman of the tribunal; and his determination upon all questions of evidence, or other questions, in conducting the inquiries then pending shall be final. Committees of the tribunal, consisting of an equal number of each class, may be constituted to examine into any question in dispute between employers and workmen which may have been referred to said committee by the tribunal, and such committee may hear and settle the same finally, when it can be done, by a unanimous vote, otherwise the same shall be reported to the full tribunal, and be there heard, as if the question had not been referred. The said tribunal, in connection with the umpire, shall have power to make, ordain and enforce rules for the government of the body when in session, to enable the business to proceed with in order, and to fix its sessions and adjournments; but such rules shall not conflict with this statute, nor with any of the provisions of the constitution and laws of Ohio.

SEC. 9. Before the umpire shall proceed to act, the question or questions in dispute shall be plainly defined in writing, and signed by the members of the tribunal, or a majority thereof of each class, or by the parties submitting the same; and such writing shall contain the submission of the decision thereof to the umpire by name, and shall provide that his decision thereon, after hearing, shall be final. The umpire shall be sworn to impartially decide all questions that may be submitted to him during his term of office. The submission and his award may be made in the form hereinafter given, and said umpire must make his award within ten days from the time the question or questions in dispute are submitted to him. Said award shall be made to the tribunal; and if the award is for a specific sum of money, said award may be made a matter of record by filing a copy thereof in the court of common pleas of the county wherein the tribunal is in session. When so entered of record it shall be final and conclusive, and the proper court may, on motion of anyone interested, enter judgment thereon; and when the award is for a specific sum of money, may issue final and other process to enforce the same.

SEC. 10. The form of the joint petition or agreement requiring for a tribunal under this act shall be as follows:

the Court of Common Pleas of-----County (or to a Judge thereof, as the case may be):

The subscribers hereto, being the number and having qualifications required in this proceeding, being desirous of establishing a tribunal of voluntary arbitration for the settlement of disputes in the----- (here name the branch

of industry) trade, and having agreed upon A, B, C, D, E, representing the employers, and G, H, I, J, and K, representing the workmen, as members of said tribunal, each are qualified to act thereon, pray that a license for bunal in the———trade may be issued to said p named above.

Employers.	Names.	Residence.	Works.	No. of em

Employes.	Names.	Residence.	By whom emp

SEC. 11. The license to be issued upon such p may be as follows :

State of Ohio,)
 ———County,) ss :

WHEREAS, The joint petition and agreement of employers (or representatives of a firm, corporation or vidual employing forty men, as the case may be), and workmen has been presented to this court (or if to a in vacation so state), praying the creation of a tribu voluntary arbitration for the settlement of disputes i ———trade within this county, and naming A, B, and E, representing the employers, and G, H, I, J a representing the workmen. Now, in pursuance of the utes for such case made and provided, said named p are hereby licensed and authorized to be and exist tribunal of voluntary arbitration for the settlement o putes between employers and workmen for the period year from this date, and they shall meet and organi the——day of——, A. D.——, at——.

Signed this——day of——, A. D.——.

——Clerk of the Court of Common Pleas——C

SEC. 12. When the tribunal agrees to submit a matter in controversy to the umpire, it may be in form as follows:

We, A, B, C, D and E, representing employers, and F, H, I, J and K, representing workmen, composing a tribunal of voluntary arbitration, hereby submit and refer unto the umpirage of L (the umpire of the tribunal of the ————trade.) the following subject-matter, namely: [Here state fully and clearly the matter submitted.] And we hereby agree that his decision and determination upon the same shall be binding upon us, and final and conclusive upon the question thus submitted; and we pledge ourselves to abide by and carry out the decision of the umpire when made.

Witness our name this——day of ——, A. D. ——.

[Signatures.]

SEC. 13. The umpire shall make his award in writing to the tribunal, stating distinctly his decision on the subject-matter submitted. And when the award is for a specific sum of money, the umpire shall forward a copy of the same to the clerk of the proper court.

AN ACT

to establish a school of mines and mine engineering in the Ohio agricultural and mechanical college.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the trustees of the Ohio state university be and they are hereby required to establish in said university, a school of mines and mine engineering, in which shall be provided the means for studying scientifically and experimentally the survey, opening, ventilation, care and working of mines; and said school shall be provided with collection of drawings, illustrating the manner of opening, working and ventilating mines and with the necessary instruments for surveying, measuring air, examining and testing the noxious and poisonous gases of mines, and (also) with (the) models of the most improved machinery for ventilating and operating (all the various kinds of) mines with safety to the lives and health of those engaged. Said school shall also be provided with complete mining laboratories, for the analysis of coals, ores, fire-clays and other minerals, and with all the necessary apparatus for testing the various coals, ores, fire-clays, oils, gases, and other minerals.

Ohio State university, establishment of a school of mines.

Course of study: school apparatus, etc.

SEC. 2. Said trustees shall employ competent persons to give instruction in the most improved (and) successful methods of opening, (and operating), surveying and inspecting mines, including the methods and machinery employed in extracting coal, ore, fire-clay, oil, gas and other minerals from the pit's mouth and for facilitating the ascent and descent of workmen, the draining and freeing of mines from

Employment and duties of instructors.

Cabinet of
specimens to
be kept.

Appropriation.

water, the causes of the vitiation of air, the quantities of fresh air required under various circumstances, natural ventilation, mechanical ventilation by flues and fans, and other ventilating machinery, the use of air engines, air compressors and coal cutting machinery; also instruction in the various uses of coals, ores, fire-clays, oils, gases and other minerals, and the methods of testing, analyzing and assaying such minerals; also the methods employed in metallurgical and other processes in the reduction of ores and in determining the qualities of metals particularly iron and steel as shown by practical and laboratory tests; and there shall be kept in a cabinet properly arranged for ready reference and examination suitably connected with said school of mines (samples of the) specimens from the various mines in the state, which may be sent for analysis, together with the names of the mines and their localities in the county from which they were sent, and the analysis and a statement of their properties attached; it shall also be his duty to furnish analysis of all minerals found in the state and sent to him for that purpose by residents of this state.

SEC. 3. There is hereby appropriated out of the general revenue fund the sum of three thousand, five hundred dollars (\$3,500), to be expended in the equipment, support and maintenance of said school of mines, as provided for in the first and second sections of this act.

AN ACT

To amend section 1 of an act entitled "An act to compel children under fourteen years of age to attend school a certain length of time each year," of the Revised Statutes of Ohio, passed April 25, 1890.

Children between eight and fourteen years compelled to attend school.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That section 1 of an act entitled "An act to compel children under fourteen years of age to attend school at certain lengths of time each year," of the Revised Statutes of Ohio, passed April 25, 1890, be amended so as to read as follows:

SEC. 1. That all parents, guardians and other persons who have care of children shall instruct them, or cause them to be instructed, in reading, spelling, writing, English grammar, geography and arithmetic, and every parent or guardian, or other persons having control and charge of any child between the ages of eight and fourteen years, shall be required to send any such child or children to a public or private school for a period of not less than twenty weeks in city districts, in each school year, commencing September 1, ten weeks of which, at least, shall be consecutive, which shall commence within the first four weeks of the first term of the school year; and in special, village and township districts, not less than sixteen weeks in each school year, eight

which shall be consecutive, unless such child or children be excused from such attendance by the superintendent of the public, private or parochial schools in cities, or by authority of the board of education in village, special and township districts, when it shall have been shown to the satisfaction of said superintendent, or said board, that the physical or mental condition of such child or children has been such as to prevent his, her or their attendance at school, or that said child or children are taught at home by some qualified person or persons in such branches as are usually taught in primary schools; and in case the said board or superintendent refuses to grant such excuse from attendance, the parent or guardian of such child or children shall have the right to appeal from the decision of the board to the probate court of the county, on giving bond, within ten days after such decision, to the approval of said court, to pay the costs made therein, and the decision of said court in the matter shall be final; provided, that all youths between eight and sixteen years of age, not engaged in some regular employment, shall attend school for the full term the schools in the district in which they reside are continued in the school year, unless excused for the reasons named in this section, and if the parents or guardians having legal charge of such youth shall fail to send these youth to school regularly for said full term, or said youth shall absent themselves from school without satisfactory excuse, said parents and guardians and said youth shall be subject to the provisions and penalties of section 8 of this act.

SEC. 2. That no child under the age of fourteen years shall be employed by any person, company or corporation during the school term, and while the public schools are in session, unless the parent, guardian, or other person having care of such child, shall be able to give substantial proof that he or she has fully complied with the requirements of section 1 of this act, or that such child has completed the usual course of primary and grammar grades in the public or private school, and such person, company or corporation shall demand such proof before giving employment to any minor, and shall make a record of said proof, and shall be required, upon the request of the officer hereinafter provided for, to allow said officer to examine said record, and also the record as provided for in section 6986a of the Revised Statutes, and any person, company or corporation employing any child contrary to the provisions of this act shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action for debt in any court, or before any justice of the peace having jurisdiction, and such action shall be brought in the name of the clerk of the board of education.

SEC. 3. That all minors over the age of fourteen, and under sixteen years, who cannot read or write the English language, shall be required to attend school at least one half each day, or to attend some evening school or school maintained by the board of education, or to take regular

Unlawful to employ children under fourteen years except under certain conditions.

Not doing so shall be a misdemeanor, and shall be punishable by a fine of not more than sixteen dollars, or by imprisonment in the county jail for not more than thirty days.

private instruction from some person qualified, in the opinion of the superintendent of schools in cities, and the clerk of the board of education in special village and township districts to teach such branches until he or she shall obtain a certificate from the superintendent of schools in cities, or the clerk of the board of education in special village and township districts, certifying that said minor can read sight and write legibly simple sentences in the English language, and every person, company or corporation having such minor in employment shall be required to exact such school attendance from such minor, and be prepared, upon demand of the hereinbefore mentioned officer, to furnish evidence that such minor does comply with requirements of this act, and any person, company or corporation failing or neglecting to exact such school attendance from such minors, shall be liable as provided for in section 2 of this act; provided, such person, company or corporation shall not have made provision for the private instruction of such minors.

Where children have been discharged from employment by reason of this act.

SEC. 4. That every parent, guardian or other person having charge or control of any child under the age of sixteen years who has been discharged from any business in order to be afforded an opportunity to receive instructions or schooling shall send such child to some public or private school until such child shall have acquired such instructions as section 3 of this act requires, and in case of failure on the part of said parent, guardian or other person to comply with the provisions of this section and of section 1 of this act, if such child shall have been excused from such attendance by the superintendent of public schools or the clerk of the board of education in special village and township districts for reasons stated in section 1 of this act, such parent, guardian or other person shall be deemed guilty of a misdemeanor, and shall, on conviction, be liable to a fine of not less than five dollars or not more than twenty dollars for first offense, not less than twenty for each subsequent offense, or to imprisonment for not less than one month nor more than three. The said fines, when paid, to be added to the public school funds of such school district in which offense occurs.

Habitual truants.

SEC. 5. That all children between the ages of seven and fourteen years who are habitual truants from school while in attendance at any public or private school are incorrigible, vicious or immoral in conduct; and all children between said ages, and all minors between the ages of sixteen and sixteen who cannot read and write the English language, who absent themselves habitually from school or who while in attendance at any public or private school are incorrigible, vicious or immoral in conduct, or habitually wander about the streets and public places during school hours, having no business or lawful occupation, shall be deemed juvenile disorderly persons and subject to the provisions of this act.

6. That in cities of the first and second class the education of said cities shall be required to employ one or more truant officers to assist in the enforcement of this act, said truant officer to be vested with police powers, and be authorized to enter factories, workshops, stores, and other places where children may be employed, and to perform such other services as the superintendent of schools or board of education may deem necessary to the preservation of the morals and good conduct of school children. In township districts the board of education shall be required to appoint some constable or other person as truant officer with same power as said officers have in said cities, and the compensation of such officers shall be fixed by the board of education.

Truant officers
to be employed
in certain
cities.

7. That the truant officer shall make daily reports to the superintendent of public schools during the term in cities, and to the clerk of the board of education in township districts, and he shall also keep a record of all transactions, subject to the inspection of the members of the board of education and it shall be the duty of the clerk of the board of education to provide suitable accommodations for said truant officer.

Truant officers
to make daily
reports.

8. That it shall be the duty of all truant officers to appear into all cases of truancy when any such come under their notice, or when requested to do so by the superintendent of public schools, or by the board of education. They shall warn such truants, their parents or guardians, in writing of the final consequences of truancy if persisted in, and shall notify the parent, guardian, or other person having charge or control of any child between the ages of six and fourteen years, that the said child is not attending school, and to require said parent, guardian or other person to cause the said child to attend some recognized school within five days from said notice, and it shall be the duty of said parent, guardian or other person having the charge and control of said child, to cause the attendance of said child at some recognized school; if said parent, guardian or other person having the legal charge and control of said child, shall willfully neglect, fail or refuse to cause the attendance of said child at some recognized school, it shall be the duty of said officers to make, or cause to be made, a complaint against said parent, guardian or other person having charge or control of such child, in any court of competent jurisdiction in the city, special village or township, in which the offense occurred, for such refusal, neglect, and upon conviction thereof said parent, guardian or other person, as the case may be, shall be punished by a fine of not less than five dollars nor more than ten dollars, or the court may in its discretion, require the person convicted to give bond in the penal sum of one hundred dollars, with one or more sureties to be approved by the court, conditioned that said persons so convicted shall

Duties of
truant officers.

cause the child or children under his or her legal charge to attend some recognized school within five days thereafter, and to remain at said school during the term prescribed by law; provided, that if said parent, guardian or other person in charge of such child shall prove inability to cause said child to attend said recognized school, then said parent, guardian or other person shall be discharged. If said court, upon complaint of said truant officer or other person, that said child is a juvenile disorderly person, as defined in section 5 of this act, proceed to hear such complaint, and if said court shall determine that said child is a juvenile disorderly person within the meaning of this act, such child shall be deemed guilty of a misdemeanor. If said court shall thereupon sentence said child to some reformatory; provided, that no child or children under ten years old shall be sentenced by any court to a children's home; and that, where in the judgment of the board of trustees of any such home, it shall be declared by resolution at a regular meeting by them held, that the character of any child thus sentenced and kept at such home is vicious and so bad as to be detrimental and harmful to the habits and good morals of other children at such home, said trustees are hereby authorized and empowered to remove such child or children to the boys' industrial school at Lancaster, Ohio, or the girls' industrial home at Delaware, Ohio, as the case may be; nor shall such child or children be kept at any such home beyond the period prescribed in section 1, or until said child shall arrive at the age of sixteen years, unless so ordered by the board of trustees of said reformatory or home. Provided, however, that said sentence may be suspended in the discretion of the court, for such time as said child shall regularly attend school and properly deport himself or herself. It is further provided that if for any cause the parent, guardian or other person having charge of a juvenile disorderly person, as defined in this act, shall fail to cause such juvenile disorderly person to attend said recognized school, then complaint against such juvenile disorderly persons may be made, heard and tried and determined in the same manner as provided for in case the parent pleads inability to cause said juvenile disorderly person to attend said recognized school. * *

Proceedings
when this act
is violated

Sec. 9. That it shall be the duty of officers empowered or appointed under this act to assist in the enforcement thereof, to institute, or cause to be instituted, proceedings against any parent, guardian or other person having charge of a child or children, or corporation violating the provisions of this act; provided, that this law shall not be operative in any school district where there are sufficient accommodations to seat children compelled to attend school under the provisions of this act, and that no prosecution shall be instituted against any parent, guardian or other person or child in charge of such, unless they have received due notification from an officer empowered under this act that they are acting in violation of this act.

SEC. 10. When any truant officer shall discover to his satisfaction any child under the age of fourteen years, wholly or partially dependent upon his or her own labor for living, or who shall be the support of others unable to provide for their own sustenance, or when in the judgment of the superintendent of the schools, or of the board of education, it may be necessary for such child to contribute to the support of the family of which he or she is a member, it shall be the duty of said truant officer to report such case to the proper authorities, whose duty it is to look after and provide for the poor, and to endeavor to obtain such relief as may release such child from labor for such length of time each year as will be required for compliance with section 1 of this act, but such child shall not be declared a pauper or removed to any infirmary, reformatory or children's home, unless he or she shall willfully neglect to take advantage of the provisions made by said truant officer for his or her relief and instruction, and said truant officer failing to obtain such relief, the superintendent of schools, or the board of education, may make suitable arrangements for the private instruction of such child while so adversely conditioned.

When this act may be suspended for a time.

SEC. 11. That it shall be the duty of all principals and teachers of all schools, public and private, to report to the clerk of the board of education of the city, special village and township districts in which schools are situated, the names, ages, and residence of all pupils in attendance at their schools, together with such other facts as said clerk may require, in order to facilitate the carrying out of the provisions of this act and the said clerk shall furnish blanks for said purpose, and said report shall be made in the last week of September, December, February and April in each year; and it shall be the further duty of said principals and teachers to report to the truant officers, the superintendent of schools or the clerk of the board of education, all cases of truancy or incorrigibility in their respective schools as soon after the offenses shall have been committed as practicable.

Duty of teachers and principals under this act.

SEC. 12. That when any of the provisions of this act are violated by a corporation, proceedings may be had against any of its officers or agents of said corporation, who in any way participate in, or are cognizant of such violation by the corporation of which they are the officers or the agents, and such officers or the agents shall be subject to the same penalties as individuals similarly offending.

When corporations violate this act.

SEC. 13. Any person or officer mentioned in this act, designated as having certain duties to perform in the enforcement of any of its provisions, neglecting to perform such duties, shall be liable to a fine of not less than twenty-five dollars, nor more than fifty dollars for each and every offense; and mayors, justices of the peace and probate judges shall have jurisdiction to try the offenses described in this act, and their judgment shall be final.

Penalty.

SEC. 14. Any provision of statutes in force when this act takes effect, which conflicts with any provisions of this

Relating to effect of statutes.

act, shall, the extent it is inconsistent with the latter, not otherwise, be held to be superseded by this act. provisions of this act shall apply to children entitled u existing statutes to attend school at the institution for education of the blind, and the deaf and dumb. Other visions of the statutes in force, relating to school affairs, not be affected by this act, sections 4023, 4024 and 402 the Revised Statutes are hereby repealed.

Passed April 25, 1890.

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CHIEF INSPECTOR OF MINES



Twenty-Eighth Annual Report

TO THE GOVERNOR OF
THE STATE OF OHIO



for the Year Nineteen Hundred and Two

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Twenty-Eighth Annual Report

OF THE

CHIEF INSPECTOR OF MINES

TO THE

Governor of the State of Ohio

FOR THE

YEAR 1902.



SPRINGFIELD, OHIO:
THE SPRINGFIELD PUBLISHING CO.,
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1903.

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COLUMBUS, OHIO, June 19, 1903.

To His Excellency, GEORGE K. NASH, Governor of the State of Ohio:.

SIR:—In compliance with Section two hundred and ninety-three of the Revised Statutes relating to Mines and Mining, I hereby have the honor of submitting the Twenty-eighth Annual Report of this Department.

That portion of the Report devoted to the statistics of the various industries which come under the supervision of this Department is compiled for the calendar year January 1, 1902, to January 1, 1903; that portion relating to the inspection of mines begins November 15, 1901, and ends November 15, 1902.

The universal and unprecedented use of machinery which is being introduced in the mines of our State, and the number of foreigners which are being annually imported into this country and who are finding employment in the mines of this and other states, who cannot speak the English language, to say nothing of their ignorance of mining, render our mining laws wholly inadequate to cope with conditions as they exist in the mining industry at the present time. I would respectfully recommend that "Mine Rules and Regulations," published by the Department in October, 1902, and which will be found in this report, be enacted into law by our next General Assembly.

Very respectfully,

ELMER G. BIDDISON,
Chief Inspector of Mines of Ohio.

ANNUAL REPORT FOR THE YEAR 1902.

Summary giving the principal facts relating to the Coal, Iron (Limestone and Fire Clay Industries of the State, as coming under supervision of this Department, compiled from statistics received for year 1902.

Number of coal producing counties.....	
Number of counties in which iron ore was produced.....	
Number of counties producing limestone.....	
Number of fire clay producing counties.....	
Total number of tons of coal mined during 1902.....	23,929
Gain in output over the year 1901.....	3,607
Number of tons of coal produced by the use of machinery.....	13,439
Number of tons produced by the pick.....	9,489
Number of mining machines in use during the year.....	
Number of mines in which mining machines were in use.....	
Number of counties installing the use of machinery.....	
Total number of persons engaged in the production of coal.....	37
Number of miners employed during the year 1902.....	27
Number of day hands employed.....	9
Number of hands operating machines.....	1
Number of hands following machines.....	11
Estimated amount of powder consumed in the production of coal by the number of firms reporting (kegs).....	286
Amount of coal produced by the use of powder.....	20,449
Total number of mines in the state during the year 1902.....	
Total number of mines reported in operation.....	
Total number of new mines opened up during the year.....	
Number of mines suspending operations for the year.....	
Number of mines reported abandoned.....	
Total number of inspections made during the year.....	1
Number of sets of scales tested.....	
Number of permanent improvements made.....	
Number of maps filed.....	
Number of casualties.....	
Number of fatal accidents.....	
Number of serious accidents.....	
Number of minor accidents.....	
Average number of days worked.....	170
Number of tons of coal mined to the life lost.....	29
One life lost to every 482 persons employed in the mining of coal.	
One person injured in every 70 1-3 employed.	
Total output of iron ore during 1902.....	1
Total output of fire clay for the year 1902.....	1,52

GENERAL COMPARISON OF THE SUMMARY OF 1902
WITH 1901.

The coal production of the State for the year ending December 31, 1902, exceeded all other years in the history of the Department; not only the greatest number of tons of coal was produced, but the gains amounted to more than any other previous year. From statistics compiled from blanks sent out by the Department on January 15, 1903, covering the output of coal for the year 1902, the amount of coal is shown to be 23,929,267 tons, the unprecedented gain of over 3,600,000 tons.

The amount of coal mined by the use of machinery was 13,439,648, a gain of 2,949,834 tons.

There was a gain of 3,916 in the number of persons engaged in the industry during the year. Nine hundred and sixty-seven mines were reported for the year, as compared with 1,006 in 1901, a loss of 39. Of this number 906 were in operation, 61 suspended operations, and 48 were entirely worked out or abandoned.

The District Mine Inspectors in charge of the various districts into which the State is divided made 1,610 inspections during the year and tested 154 sets of scales.

Three hundred and three permanent improvements were made in the mines, as compared with 208 during the year 1901. The improvements are as follows: Furnaces built, 59; fans erected, 50; air shafts sunk, 98; second openings, 37; safety catches applied, 21; stairways built, 20; speaking tubes inserted, 10, and fire baskets to the number of eight were hung for the improved ventilation of the mines.

The average time worked was 176 2-5 days, a loss of 1 23-30 days.

The fire clay production increased 191,648 tons, while the iron ore production showed a loss of 30,644 tons.

Gains are shown in two classifications of limestone, and losses in seven.

There was no change in the personnel of the Department. The Mining Laws of the State are published in this report, as also the list of firms operating fire clay mines and stone quarries. The index follows

THE COAL PRODUCTION FOR THE YEAR 1902.

The world's production of coal, as estimated at this writing, will probably show but a very small increase over that of the year 1901, and revised statistics may show a decrease. Some countries suffered from manufacturing depressions and labor troubles, and from various causes to which the industry is subject.

The United States maintained her supremacy in the amount of coal produced over other countries for the year 1902, although the increase is light, owing to the great anthracite strike in Pennsylvania, which reduced the output of anthracite coal in that state alone to over 22,000,000 long tons. The output of West Virginia was also reduced 2,000,000 tons, due to a sympathetic strike among the miners of that state. Germany shows a decrease in her coal production, while England, which prior to 1901 led the world in point of production, will show a slight increase, and ranks second with other countries in the amount of coal produced during the year 1902.

The year 1902 in the United States was without a doubt one of the most important in the history of the Coal Industry. The bituminous coal trade experienced an impetus never before witnessed, due to its being substituted for anthracite coal, of which the country suffered a famine by reason of the great strike of the anthracite miners of the State of Pennsylvania, which covered a period of six months, causing the loss of thousands of dollars in wages, reducing the output, etc., and depriving industrial plants and families of fuel, entailing widespread inconvenience and even suffering. The price of anthracite as well as bituminous coal immediately advanced, and in some places where coal was scarce exorbitant and unjust prices were asked and paid, and at the close of the year the coal trade was exceedingly active and excited. In some parts of the East soft coal retailed at \$9.00 a ton, and anthracite at the enormous sum of \$20.00, and even \$30.00 was paid per ton. A steady demand prevailed at all times. A shortage of cars and lack of railroad transportation facilities continued throughout the year.

By October 1st the shortage of anthracite coal had reached such an acute stage that the outlook for the winter months favored much distress and suffering. In view of these alarming facts, public opinion became so strong as to result in the strike being arbitrated by a Commission which was to be selected by the President of the United States, work in the mines to be resumed in the meantime. At this writing that Commission has, to the satisfaction of all, passed upon the points of contention existing between the miners and operators, and has framed an agreement by which both sides of the controversy are to abide for a period of three years. The

attitude of the Nation is due our President for the patriotic stand he took in the interest of humanity in requesting both sides to arbitrate their differences. The miners and operators both made concessions and a happy ending terminated one of the greatest industrial wars the world has ever known, and which, we trust, will never again be witnessed in the history of the Coal Industry. The greatest truth we glean from the outcome of this great industrial strike is that if we would enjoy the greatest industrial advances, labor and capital must walk hand in hand, each conceding the rights and privileges of the other.

While the demand for coal abroad did not decrease during the year, the condition of the Industry at home prevented the coal producers from engaging in any extensive trade with foreign nations. On January 1, 1903, Congress lifted the duty on foreign coal for the period of one year. The acute stage of the anthracite coal strike at that time, in our judgment, merited such a step.

There were no labor contentions in the State during the year 1902 of any prominence. A few local suspensions of short duration occurred during pending grievances, but they were soon adjusted by the prompt action of the officials of the United Mine Workers of America, and work resumed.

On June 18, 1902, a national convention of delegates of the United Mine Workers of America was called by their National President, John Mitchell, which was for the purpose of deciding whether there should be a general suspension of work ordered pending the settlement of the strike which was in progress among the operators and miners of Pennsylvania. The convention was held in Indianapolis, Indiana, July 17, the majority of the delegates adhering to the agreement made by them with the operators in the month of February preceding, and which was to cover a period of one year. However, an assessment of 10 per cent. of the monthly wages of each member of the United Mine Workers of America was levied upon to assist the striking miners of Pennsylvania.

THE COAL OUTPUT IN OHIO FOR 1902.

According to statistics printed at this time, Ohio will outrank West Virginia in the amount of coal produced. This, in all probability, was due to the strike that was on in West Virginia during the year, reducing the coal output in that state to over 2,000,000 tons. Although the output of Pennsylvania was reduced over 22,000,000 tons, that state still retains first place in point of production, Illinois following second.

The total amount of coal produced in the state during the year 1902 was 23,929,267 tons, a gain of 3,607,977. These figures represent the greatest gain over any other year since the creation of the Department; also the greatest number of tons of coal was mined. This large production of coal was due to the great demand for bituminous coal in markets which previous to the anthracite coal strike was supplied with that fuel. So great was the demand that it was impossible for operators to fill the contracts which were made months before, owing to the shortage of cars which continued throughout the year, the railroads being unable to handle the immense amount of freight offered them, owing to insufficient transportation facilities.

The coal tonnage given by the appended table is divided into three classifications—lump, nut, pea and slack. The amount of lump coal is shown to be 17,542,586, the immense gain of 2,866,249 tons. The total amount of nut coal is 2,655,602, a gain of 437,001 tons. The amount of coal mined known as pea and slack was 3,731,079, exceeding the production of nut by over 1,000,000 tons, and a gain over the preceding year of 304,727 tons.

Athens county, which for the past two years surpassed all other counties in the amount of coal produced, still maintained that position during 1902, producing 3,666,993 tons, a gain of 600,460 over the year 1901, when it amounted to 471,674 tons. No county has ever equaled Athens in point of production, as shown by the output of 1902.

Guernsey county, which in the year 1901 occupied fifth place, ranks second in the amount of coal produced during 1902, the total number of tons being 2,968,108, a gain of 873,221. This great gain was probably due to the increased capacity of all the mines.

Perry county, a noted coal producer, dropped from second place to third for the year 1902, producing 2,830,962 tons. Notwithstanding the fact that this county occupied third position, the amount of coal produced showed a gain of 267,911 tons, when compared with the previous year, while the gain in 1901 amounted to only 45,793 tons.

Jackson county still ranks fourth in the amount of coal produced making a return of 2,316,123 tons, a gain of 174,657. This county for the year 1901 returned a loss of 177,855 tons.

Hocking county for the year 1902 shows a loss of 230,064 tons, mining only 2,118,805 tons, compared with 2,348,869 tons for the preceding year. This large amount in the loss shown in the total number tons produced places this county fifth in the coal producing counties, while in the year 1901 it occupied third place. Belmont county comes sixth in point of production, showing a total tonnage of 2,058,066, a gain of 513,214 tons over the year 1901, but in the counties showing the greatest gains it ranks third, being exceeded in output in gains by Guernsey and Athens counties. Athens county produced over 2,000,000 tons of coal, and five other counties, viz., Belmont, Guernsey, Hocking, Jackson and Perry, produced over 2,000,000 tons. Jefferson and Tuscarawas each produced over 1,500,000, Stark over 1,000,000, while Columbiana mined almost 1,000,000 tons. The combined output of these ten counties amounted to 21,379,338, or 89 1-3 per cent. of the entire output of the State.

Guernsey county shows the greatest gain, where it amounted to 73,221 tons; Athens, 600,460; Belmont, 513,214; Jefferson, 486,144; Perry, 267,911; Tuscarawas, 253,084; Harrison, 181,994; Jackson, 174,377, and Stark, 135,656 tons.

Losses occur in the following. Hocking, showing the greatest, 230,064; Noble, 47,852; Medina, 43,458, and Summit, 29,955 tons. The Hocking Valley district, which is composed of the following counties, Hocking, Athens and Perry, produced 8,616,760 tons, or 37 2-3 per cent. of the entire output of the State. This amount shows a gain of 18,327 tons, when compared with the combined output of these three counties for the year 1901.

Gains occurred in twenty-one counties, amounting to 3,455,129 tons, and losses in nine, aggregating 884,753 tons. The year 1901 reported gains in sixteen counties and losses in fifteen.

In reviewing the Coal Trade Industry for the year 1902, we note the wonderful progress made in all of its various classifications over all her years, and the beginning of 1903 bids fair to outclass even the wonderful achievements made during the year 1902. Activity in all of the industrial branches of the United States is notable, and the demand for our products is world renowned. May we still continue to, in the future as in the past, merit our well-earned position in the industrial and commercial world.

TABLE SHOWING THE COAL PRODUCTION OF THE STATE BY COUNTIES DURING THE YEAR 1902.

Counties.	Tonnage for 1902.			Total.	Rank in production.
	Lump.	Nut.	Pea and Slack.		
Athens	2,974,033	319,835	373,125	3,666,993	1
Belmont	1,260,343	277,686	389,984	2,058,066	2
Carroll	174,930	36,704	40,018	251,652	15
Columbiana	559,787	125,622	183,017	868,426	10
Coshocton	253,381	60,976	95,952	410,309	11
Gallia	18,200	8,100	150	26,450	25
Guernsey	2,024,366	322,965	620,777	2,968,108	3
Harrison	236,949	13,024	43,868	293,841	13
Holmes	11,581	3,011	2,595	17,187	26
Hocking	1,614,459	188,677	315,669	2,118,805	5
Jackson	1,703,431	397,264	215,428	2,316,123	4
Jefferson	1,384,168	107,023	298,261	1,789,452	7
Lawrence	149,924	26,755	9,956	186,635	16
Mahoning	71,889	11,031	11,853	94,773	20
Medina	98,130	16,333	25,470	139,933	17
Meigs	273,584	26,070	41,046	340,700	12
Morgan	35,195	5,200	10,042	50,437	23
Monroe	127	.....	5	132	29
Muskingum	211,660	28,968	42,904	286,532	14
Noble	28,331	4,847	1,814	34,992	24
Perry	2,159,994	277,518	393,450	2,830,962	6
Portage	74,278	10,035	13,615	97,928	18
Scioto	6,283	1,034	1,034	8,351	27
Stark	890,842	121,555	172,352	1,184,749	9
Summit	72,356	7,822	13,408	93,586	22
Trumbull	6,636	567	940	8,143	27
Tuscarawas	1,092,379	232,010	253,265	1,577,654	8
Vinton	84,483	12,680	13,255	110,423	19
Washington	2,324	553	1,053	3,930	28
Wayne	68,543	11,732	13,740	94,015	21
Totals	17,542,586	2,655,602	3,731,079	23,929,267	

SHOWING THE COAL TONNAGE OF THE STATE FOR 1902 AS
COMPARED WITH THE YEAR 1901.

Counties.	1901.	1902.	Gain.	Loss.
.....	3,066,533	3,666,993	600,460	.....
at	1,544,832	2,058,066	513,214	.....
.....	254,510	251,652	.....	2,858
blana	792,533	868,426	75,893	.....
ton	360,635	410,309	49,674	.....
.....	15,740	26,450	10,710	.....
ey	2,094,887	2,968,108	873,221	.....
on	111,847	293,841	181,994	.....
s	16,548	17,187	639	.....
g	2,348,869	2,118,805	.....	230,064
n	2,141,466	2,316,123	174,657	.....
on	1,303,308	1,789,452	486,144	.....
ce	143,678	186,635	42,957	.....
ing	52,765	94,773	42,008	.....
.....	183,391	139,933	.....	43,458
.....	255,892	340,700	84,808	.....
l	33,504	50,437	16,933	.....
.....	308	132	.....	176
gum	226,375	286,532	60,157	.....
.....	82,844	34,992	.....	47,852
.....	2,563,051	2,830,962	267,911	.....
e	86,781	97,928	11,147	.....
.....	10,349	8,351	.....	1,998
.....	1,049,093	1,184,749	135,656	.....
t	123,541	93,586	.....	29,955
ull	12,148	8,143	.....	4,005
awas	1,324,570	1,577,654	253,084	.....
.....	88,024	110,423	22,399	.....
gton	1,738	3,930	2,192	.....
.....	31,530	94,015	62,485	.....
als	20,321,290	23,929,267	3,968,343	360,366
n .....	.....	.....	3,607,977	.....

TABLE SHOWING THE COAL OUTPUT OF THE STATE FROM 1872
1902 INCLUSIVE.

Years.	Output.	Gain.	Loss.
1872	5,313,294	.....	.....
1873	4,550,028	.....	761
1874	3,267,585	.....	122
1875	4,864,259	1,596,674	.....
1876	3,500,000	.....	1,364
1877	5,250,000	1,750,000	.....
1878	5,500,000	250,000	.....
1879	6,000,000	500,000	.....
1880	7,000,000	1,000,000	.....
1881	8,225,000	1,225,000	.....
1882	9,450,000	1,225,000	.....
1883	8,229,429	.....	1,220
1884	7,650,062	.....	579
1885	7,816,179	166,117	.....
1886	8,435,211	619,032	.....
1887	10,301,708	1,866,479	.....
1888	10,910,946	613,338	.....
1889	10,907,385	.....	3
1890	11,788,859	881,474	.....
1891	13,050,187	1,261,328	.....
1892	14,599,908	1,549,721	.....
1893	14,828,097	228,189	.....
1894	11,910,219	.....	2,91
1895	13,683,879	1,773,660	.....
1896	12,912,608	.....	71
1897	12,448,822	.....	44
1898	14,058,155	1,609,333	.....
1899	15,908,934	1,850,799	.....
1900	19,426,649	3,517,715	.....
1901	20,321,290	894,641	.....
1902	23,929,267	3,607,977	.....

COAL MINED BY THE USE OF MACHINERY.

The additional use of machinery in the mines of our State during the year 1902 resulted in 13,439,648 tons being mined. When we take into consideration the amount mined by the use of machinery during 1901 (10,489,814 tons) we can form some idea as to the important part machinery plays in producing the coal for market.

In comparing the amount of coal mined by the use of machinery during the year 1902, with that produced in 1901, we find that 2,949,834 more tons were mined; the gain of 1901 over 1900 was over a million tons.

Seventeen counties reported the use of mining machines during 1902, a gain of four over the preceding year, Coshocton, Mahoning, Morgan and Vinton being added to the list. Not only was there an increase in the number of counties in which mining machinery was in use, but there was also a gain of 33 in the number of mines which use mining machinery, increasing the number from 429 to 574, or a gain of 145.

The number of hands operating mining machines during the year was reported to be 1,418; the number following machines is given at 11,089. Athens county leads in the number of hands operating and following machines for the past three years, having a total of 3,799, a gain of 406 over the year 1901. The amount of coal mined by same was 3,590,277 tons. This amount represents almost the entire output of coal reported from this county, showing the almost universal use of machinery in almost all of its mines.

Guernsey county ranks second in the number of miners operating and following machines, producing 2,889,486 tons. This county uses machines almost exclusively to mine the coal.

Perry county is third in returning the greatest number of machine men, having in all 2,301, and mining 2,116,833 tons. Hocking ranks fourth, having 1,700 men and mining 2,001,212 tons of coal.

It is interesting to note that gains occur in all counties employing the use of machinery with the exception of three, viz., Columbiana, Hocking and Noble. The most notable gains occur in Guernsey county, amounting to 977,866 tons. Athens county shows large gains in machine-mined coal, where the production increased 771,498 tons. This county alone employs the use of one hundred and twenty mining machines and twenty-one motors, and six new mines during the year installed mining machinery.

In the returns received from Hocking county a loss of 267,503 tons occurs. A slight loss also is found in Columbiana county, amounting to 2,381 tons.

The second table given is designed to show the amount of coal produced by the use of machinery from the year 1889 to 1902, inclusive.

**TABLE SHOWING THE AMOUNT OF COAL MINED BY MACHINERY
TIME WORKED, AND THE NUMBER OF MEN EMPLOYED IN MA
MINING DURING THE YEAR 1902,**

Counties.	Days worked.	Hands operating machines.	Hands following machines.	Lump.	Nut.	Pea and slack.	
Athens	171	376	3,423	2,770,868	285,986	533,423	:
Belmont	215	84	473	413,086	35,096	121,810	:
Carroll	194	34	149	84,929	13,345	18,964	:
Columbiana ..	203	42	245	208,938	42,371	61,753	:
Coshocton ..	220	14	32	29,403	9,600	11,807	:
Guernsey	273	185	1,625	1,969,030	314,613	605,843	:
Harrison	269	10	60	41,628	244	5,059	:
Hocking	233	159	1,541	1,523,831	175,887	301,494	:
Jackson	218	70	399	368,837	36,153	55,811	:
Jefferson	208	138	779	732,318	68,614	170,130	:
Mahoning	184	1	3	1,600	200	200	:
Morgan	160	5	32	17,023	1,600	3,442	:
Noble	50	10	29	9,104	1,138	1,138	:
Perry	148	248	2,053	1,653,006	184,402	279,425	:
Stark	132	10	67	42,918	5,721	8,686	:
Tuscarawas ..	175	30	165	201,054	1,430	6,451	:
Vinton	169	2	14	6,739	.....	3,500	:
Total ...	3,222	1,418	11,089	10,074,312	1,176,400	2,188,936	13
Average .	190						

SHOWING ANNUAL PRODUCTION OF MACHINE MINED COAL
 E THE INTRODUCTION OF ELECTRICITY INTO THE MINES OF
 STATE.

Years.	Output.	Gain.	Loss.
.....	900,000	.....	.....
.....	1,148,499	248,499	.....
.....	1,654,081	505,632	.....
.....	2,239,080	584,999	.....
.....	2,553,074	313,994	.....
.....	2,555,466	2,392	.....
.....	3,120,456	564,990	.....
.....	3,368,349	247,893	.....
.....	4,106,124	737,775	.....
.....	5,252,598	1,146,474	.....
.....	6,741,069	1,488,462	.....
.....	9,457,777	2,716,717	.....
.....	10,489,814	1,032,637	.....
.....	13,439,648	2,949,334	.....

MINES IN WHICH MINING MACHINES HAVE BEEN INSTALLED, AND THE NUMBER AND KIND OF EACH.

Each successive year beholds more and more the inroad that machinery is making over the hand labor of man, as larger and greater areas are being undermined, and corporations formed which operate on an extensive plan, thereby greatly reducing the cost in the output of coal by the use of machinery.

The use of machinery in the production of coal in America exceeds that of any other country, and the statement can without doubt be made that more coal is mined in this country by its use than in all of the other countries combined. A glance at the statistics showing the rapid increase in the amount of coal produced by the use of machinery impresses one with the fact that the time is not probably far distant when the use of the pick will be discontinued, and that the use of machinery will permanently take its place as the most successful method of mining coal. When machinery was first introduced into the mines, and even now, it was met with opposition by the miners. This, no doubt, was due to the crude designs of mining machines when they were first introduced and the amount of physical labor entailed in the operation of the machines, but with the vast improvement in mining machinery, due to the inventor's skill, and with closer application on the part of the miner to successfully operate a mining machine, this prejudice is fast disappearing, especially in the States of Ohio, Indiana, West Virginia and Pennsylvania.

Ohio has taken no retrograde step in the use of mining machinery in the mines of the State during the year 1902. Not only did the number of mines using machinery increase, but also four additional counties were added to the list in which machinery had never before been introduced.

Seventeen counties in all report the use of machinery. The total number of mines using machinery during 1902 was 141, an increase of 33. The number of machines increased from 429 to 574, a gain of 145. Of this number 527 were of the electric type, and 47 compressed air. It will be noticed that the number of mines equipped with electric machines far exceeds the number of machines of the compressed air type. This is probably due to the fact that the cost of installing and maintaining a compressed air pipe line is said to be about one-third greater than the cost of electric equipment; however, in mines which generate fire damp to a greater or less degree it is impracticable to equip them with electric machinery.

The use of machinery was introduced for the first time in the mines of Coshocton, Mahoning, Morgan and Vinton. During the year mining machines were introduced in the following mines by counties: Athens, Carbondale No. 2 and No. 3, Broadwell No. 23, Utley No. 2 and Modoc; Belmont, Wheeling Creek, Empire No. 6, Kennon No. 2 and Rosser; Carroll, Somers No. 2; Columbiana, McNab Shaft, New Salisbury; Coshocton, Cassingham, No. 2 and No. 3; Guernsey, Murray Hill; Jackson, Bats' Nest and Jackson Hill No. 1; Jefferson, Diamond, Rush Run and Ruthven; Mahoning, Greenamyer Shaft; Morgan, Rose Valley; Noble, Laura; Perry, Beech Grove, Pine Run, Union, Bristol, Lyonsdale New, Block, Northwest and Hazelton; Tuscarawas, No. 12 and No. 13; Tuscarawas, Center Valley, and in Vinton county, the Oretton mine. The use of mining machines was discontinued at Half Moon No. 3, Athens county, and the Black Diamond mine, Athens county, remained idle during the year. No mining machines were reported in use in the Magnolia mine, Carroll county; No. 15 mine, Hocking county, and Enterprise mine, Jackson county; No. 16 mine, Perry county, was abandoned; Glenwood mine, Noble county, was also abandoned. The number of motors increased from 194.

The amount of coal produced by the use of machinery was 13,439,648

The following mines have in use two or more motors: No. 10 mine, Morgan county (2); also Daleton Nos. 1, 2 and 4 mines, Athens county; Belmont county, Empire Nos. 1, 2 and 6 mines have installed 4 motors; Slope mine, Columbiana county three (3) motors; King's mine, Morgan county three (3) motors; Roby No. 1, Harrison county, two (2); Corwin No. 1 mine, Jackson county, two (2); Dillon No. 2 mine, Long Conner Nos. 1 and 2 mines, Jefferson county, owned by the W. & L. Coal Co., Dillonvale, Ohio, have installed nine (9) motors; Walnut Hill mine, Jefferson county, also has installed two (2) motors; Upson mine, Morgan county, two (2); the following mines, owned and operated by the Continental Coal Co., Columbus, Ohio, have installed ten (10) motors; Nos. 201, 203, 204, 205, 252, 254, 266, 267, 275 and No. 301 situated in Perry county.

TABLE SHOWING THE NUMBER, MANUFACTURER OF MOTIVE POWER AND LOCATION OF THE MINING MACHINES
AND ELECTRIC MOTORS IN OPERATION IN THE STATE DURING THE YEAR 1902.

Name of Mine.	County.	Electricity.				Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Jacoby.
Carbondale No. 2.....	Athens.....	.....	.....	.....	.....	.....	.....	.....	.....
Carbondale No. 3.....	".....	.....	.....	6.....	.....	.....	.....	.....	.....
No. 311.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 275.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 267.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 266.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 256.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 254.....	".....	14.....	38.....	.....	.....	.....	.....	.....	9 Morgan-Gardners.
No. 252.....	".....	.....	.....	.....	.....	.....	.....	.....	1 Jeffrey.
No. 205.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 204.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 203.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 201.....	".....	.....	.....	.....	.....	.....	.....	.....	.....
No. 10x.....	".....	2.....	3.....	1.....	1 Morgan-Gardner.
No. 10.....	".....	6.....	2 Morgan-Gardners.
Bell Run No. 55.....	".....	3.....
No. 24.....	".....	4.....	1 Sperry Elec.
Broadwell.....	".....	1.....

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MINING MACHINES AND ELECTRIC MOTORS IN OPERATION—Continued.

Name of Mine.	County.	Electricity.				Compressed Air.			Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Jacoby.
Leatherwood No. 1.....	"	2	1	.....	.....	.....	.....	.....	1 Morgan-Gardner.
Cisco .....	"	.....	5	.....	.....	.....	.....	.....	1 Jeffrey.
Kings .....	"	.....	6	.....	.....	.....	.....	.....	3 Link belt.
Old Orchard .....	"	.....	5	.....	.....	.....	.....	.....	1 Link belt.
Forsythe	"	3	.....	.....	.....	.....	.....	.....	1 Link belt.
Nicholson	"	2	.....	.....	.....	.....	.....	.....	.....
Klondike .....	"	.....	4	.....	.....	.....	.....	.....	.....
Imperial .....	"	.....	4	.....	.....	.....	.....	.....	.....
Little Kate .....	"	.....	3	.....	.....	.....	.....	.....	.....
Black Top .....	"	.....	6	.....	.....	.....	.....	.....	.....
Murray Hill .....	"	.....	1	.....	.....	.....	.....	.....	.....
Tippecanoe	Harrison	.....	.....	1	.....	.....	.....	.....	1 Link belt.
Roby No. 1	"	6	.....	.....	.....	.....	.....	.....	2 Jeffrey.
New Pittsburg No. 1.....	Hocking	6	.....	.....	.....	.....	9	.....	.....
New Pittsburg No. 3	"	4	2	.....	.....	.....	.....	.....	.....
New Pittsburg No. 6	"	2	4	.....	.....	.....	.....	.....	1 Jeffrey.
New Pittsburg No. 7	"	4
Sand Run	"	4
Morris No. 2	"
Morris No. 3	"	6	5	2	1	2 Link belt.
Last Run	"	4

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NUMBER OF MINES IN OPERATION DURING THE YEAR 1902, AND THE TIME WORKED AS COMPARED WITH THE YEAR 1901.

The total number of mines in the State for the year 1902, as reported to the Department, was nine hundred and sixty-seven. Of this number nine hundred and six were in operation.

As compared with the year 1901, this number shows a loss of forty-one. This number includes small mines employing from two to ten men, and large mines employing ten or more than ten men.

For the year that has just passed Perry county shows the largest number of mines in operation, reporting seventy-nine; Tuscarawas and Stark each seventy-six; Jackson, sixty-eight; and Muskingum, sixty-seven.

Ten counties show gains, viz.: Jefferson, nine; Vinton and Jackson each three; Belmont, Stark and Wayne each two, and Columbiana, Holmes, Hocking and Lawrence each one, making a total gain of twenty-five.

Losses occur in sixteen counties, Muskingum showing the greatest, where it amounted to eighteen; Noble and Perry, each seven; Athens and Harrison, each five; followed by Carroll, Guernsey, Coshocton, Mahoning, Meigs, Monroe, Portage, Scioto, Summit, Trumbull and Tuscarawas. The total loss amounted to sixty-six.

The average time worked during the year 1902 was practically the same as the amount returned for the year 1901, there being only a difference of one and twenty-three thirtieths days.

In the amount of time worked we find that fifteen counties show a gain amounting to three hundred and thirty-nine days. They occur in the following counties: Belmont, Carroll, Columbiana, Gallia, Guernsey, Harrison, Jackson, Lawrence, Mahoning, Medina, Morgan, Noble, Stark, Trumbull and Tuscarawas.

Losses are found in the following counties: Athens, Coshocton, Holmes, Hocking, Jefferson, Meigs, Monroe, Muskingum, Perry, Portage, Scioto, Summit, Vinton, Washington and Wayne, amounting to three hundred and ninety-four days.

Morgan county shows the greatest gain, forty-three days; Gallia thirty-two, Tuscarawas thirty, and Harrison twenty-eight.

The greatest loss is found in Washington, fifty-eight; Monroe forty-seven, Hocking forty-six, and Portage forty-three.

TABLE SHOWING COMPARATIVELY THE NUMBER OF MINES OF
AND DAYS WORKED IN 1901 AND IN 1902.

Counties.	Number mines worked in 1901.	Number mines worked in 1902.	Gain.	Loss.	Average number days worked 1901.	Average number days worked 1902.
Athens	51	46	.....	5	185	179
Belmont	62	64	2	.....	195	208
Carroll	23	20	.....	3	223	245
Columbiana	50	51	1	.....	186	202
Coshocton	24	23	.....	1	230	194
Gallia	3	3	.....	.....	168	200
Guernsey	33	30	.....	3	188	199
Harrison	41	36	.....	5	121	149
Holmes	11	12	1	.....	195	180
Hocking	16	17	1	.....	231	185
Jackson	65	68	3	.....	167	191
Jefferson	43	52	9	.....	194	185
Lawrence	21	22	1	.....	206	228
Mahoning	32	28	.....	4	172	186
Medina	13	13	.....	.....	216	242
Meigs	32	31	.....	1	180	173
Morgan	2	2	.....	.....	158	201
Monroe	5	2	.....	3	132	85
Muskingum	85	67	.....	18	199	185
Noble	52	45	.....	7	135	148
Perry	86	79	.....	7	176	162
Portage	5	4	.....	1	171	128
Scioto	5	3	.....	2	106	78
Stark	74	76	2	.....	177	203
Summit	12	10	.....	2	174	162
Trumbull	8	6	.....	2	125	144
Tuscarawas	72	70	.....	2	181	211
Vinton	12	15	3	.....	180	150
Washington	2	2	.....	.....	166	108
Wayne	7	9	2	.....	208	169
Total	947	906	25	66	178½	176½

LARGE AND SMALL MINES IN THE STATE, AND THE NUMBER OF EACH THAT WERE IN OPERATION DURING THE YEAR 1902.

The mines of the State are classified into two divisions, large mines employing more than ten men and small mines in which less than ten men find employment. Of a necessity, the large mines, where hundreds of men are employed daily, demand the most attention at the hands of the District Mine Inspectors, especially in mines where the underground workings extend over large areas, making them exceedingly difficult to ventilate.

While the total number of mines of the State shows a decrease for the year 1902, the number of large mines increased from 437 to 446; of this number 434 were in operation during the year, or an increase of 14 over the year 1901.

The following mines, opened up during the year, give promise of being operated on an extensive scale, and will be installed with electric machinery: Modoc mine, located in Athens county, and owned by the Congo Coal and Mining Co., Columbus, Ohio; Cement mine, Lawrence county, owned by the Iron-ton Cement Co.; Superior Nos. 8, 9 and 10, Jackson county, owned by the Superior Coal Co., Jackson, Ohio; in Perry county the following large mines will be equipped with electric machinery: New Crescent No. 2, owned by Phillips & Co., Cleveland; Pine Run mine, operated by Roberts & Davis, Hemlock, Ohio; Santoy No. 1 and No. 2, owned by the New England Coal Co., Columbus, Ohio; Northwest, owned by the Northwest Coal Co., Toledo, Ohio; Hamilton & Wallace No. 2, owned by Hamilton & Wallace Coal Co., Redfield, Ohio, and Rends, owned by the Standard Coal Co., Columbus, Ohio. No. 10 mine, Muskingum county, owned by the Muskingum Coal and Railway Co., Zanesville, Ohio, will be a large mine employing the pick for mining the coal. Somers No. 2 and No. 3, owned by the Somers Mining Co., Cleveland, Ohio, and located in Carroll county, give promise of being worked on an extensive scale and will be equipped with electrical machinery. In Columbiana county the following are given: Heatherington Big Vein, owned by the Heatherington Mining Co., Cleveland, Ohio; Slope No. 2, owned by the O. P. Coal Co., Cleveland, Ohio; New Salisbury, owned by the Norris Mining Co., Pittsburg, Pa.; McNab Shaft, owned by the J. B. McNab Coal Co., Salem, Ohio; Peerless, owned by the Townsend Coal Co., Cleveland, Ohio, and the Big Walnut, owned by the Peerless Coal Co.,

Cleveland, Ohio; in Jefferson county, Ruthven mine, owned by the Salisbury Coal Co., Columbus, and Zerbe, owned by the O. & P. Coal Co., Cleveland, Ohio; in Coshocton county, Arnold No. 1, No. 2 and No. 3, owned by the Arnold Coal Co., Columbus, Ohio; Detroit, owned by the Wills Creek Coal Co., Detroit, Mich.; Murray Hill, owned by the Akron Coal Co., Akron, Ohio; in Tuscarawas county the following: the Center Valley mine, owned by the Massillon-Tuscarawas Coal Co., Massillon, Ohio; Midvale No. 3, new, owned by the Midvale & Goshen Coal Co., Cleveland, Ohio; Beaver Dam No. 1, owned by the Beaver Dam Coal Co., Cleveland; the Baltic No. 1 mine, opened up during the year in this county, will be a large one, but will be operated on the old methods; in Noble county, the Laura mine, owned by the Eastern Ohio Coal Co., Cleveland, Ohio. In Stark county, the White Oak mine, owned by the White Oak Coal Co., Cleveland, Ohio, Canton Coal Mining Co.'s mine, will be opened up on a large scale, but will not install machinery, as will not also the following: Card No. 5, owned by the Card & Prosser Coal Co., Cleveland, which is located in Medina, and the Stewart mine, owned by the same company, located in Wayne county, and the New Chippewa mine, owned by the Waggoner Coal Co., Akron, Ohio, and located in Wayne county.

Jackson county reports 54 large mines in operation, an increase of 8; Perry, 44, a decrease of 2; Athens and Tuscarawas each report 38, the former showing a loss of 4 and the latter a loss of 1.

The total number of large and small mines is given at 967, 906 of which were in operation during the year. Twelve large mines and 49 small mines suspended operations during the year.

The number of small mines in operation during the year was 472, a loss of 55 when compared with the previous year. The greatest number of small mines was reported by Muskingum, 55; followed by Noble with 42, Stark 39, Perry 35, and Harrison and Tuscarawas each reported 32.

SHOWING THE NUMBER OF LARGE AND SMALL MINES IN THE
STATE AND THE NUMBER OF EACH THAT WERE IN OPERATION
DURING 1902.

Counties.	No. mines which em- ploy more than ten men.	No. mines which em- ploy less than ten men.	Total by counties.	No. large mines in op- eration during 1902.	No. small mines in operation during 1902.	Total No. mines in operation during 1902.
.....	39	9	48	38	8	46
.....	35	33	68	33	31	64
.....	8	14	22	8	12	20
ana	23	33	56	23	29	51
on	16	8	24	15	8	23
.....	2	4	6	2	1	3
y	19	13	32	18	12	30
l	4	35	39	4	32	36
.....	.....	12	12	.....	12	12
.....	15	2	17	15	2	17
.....	54	15	69	54	14	68
l	31	24	55	29	23	52
e	10	13	23	10	12	22
ig	6	25	31	6	22	28
.....	8	5	13	8	5	13
.....	16	17	33	15	16	31
.....	2	.....	2	2	.....	2
.....	.....	5	5	.....	2	2
um	12	63	75	12	55	67
.....	3	46	49	3	42	45
.....	45	38	83	44	35	79
.....	4	.....	4	4	.....	4
.....	.....	4	4	.....	3	3
.....	38	41	79	37	39	76
.....	2	9	11	2	8	10
ll	1	5	6	1	5	6
was	39	35	74	38	32	70
.....	9	7	16	9	6	15
ston .....	.....	2	2	.....	2	2
.....	5	4	9	5	4	9
ul	446	521	967	434	472	906

MINERS AND DAY HANDS.

The unparalleled demand for coal, notable throughout the year, necessity caused all mines to be in operation at their full capacity, and miners enjoyed a year of unusual prosperity. So great was the demand for this industrial commodity, that the trade found it impossible to supply the market, and compelled many mines to temporarily suspend operations on account of the lack of transportation facilities.

In all, 37,421 persons were employed in the mining of coal during the year 1902, as compared with 33,505 persons so engaged during 1901, a gain of nearly 4,000. This number represents miners who mine the coal by pick or otherwise, and inside and outside day laborers, who are employed in the operation of the mine in general and in preparing the coal for the market. Miners are paid for the amount of coal they mine, receive so much per ton, etc., while day hands are paid by the day only.

The number of miners employed during the year 1902 was reported to be 27,613, a gain of 2,712 over 1901. The counties employing the greatest number of miners are as follows: Athens 4,043, Perry 3,825, Jackson, 2,825, Belmont 2,488, and Jefferson 2,278.

Seventeen counties show gains in the number of miners employed. Jefferson reports the greatest gain of 990, Belmont 558, Perry 488, Athens, Guernsey and Harrison in the order named.

The total number of day hands for 1902 was 9,808, a gain of 1,287 over 1901. Of this number 6,287 were employed on the inside of mines, and 3,521 were employed on outside labor.

In the total number of day hands employed, Jackson county headed the list with a total of 1,470, Athens 1,431, Perry 1,174, Guernsey 877, and Belmont 722.

The counties showing the greatest gain in day hands are as follows: Perry, with a gain of 289; Jackson, 237; Athens, 214; Hocking, 188; and Jefferson, 102.

The mines of Belmont, Jefferson and Harrison worked about three-fourths time; in the Hocking Valley and Sunday Creek Districts a great deal of time was lost owing to the scarcity of cars; in the Counties of Jackson, Hocking, Scioto and Vinton two-thirds time; mines located at Newmarket, Perry county, Congo, and all the mines situated along the C. & N. R'y., were in operation only about one-half time owing to the shortage of cars and lack of locomotives to haul the coal; in Stark, Medina, Seneca and Wayne, the mines were reported in operation five-sixths of the time during the 250 days. The scarcity of cars in the latter named mines was more pronounced than in 1901; the mines of Guernsey, Tuscarawas and Coshocton worked about three-fourths time.

HOWING THE NUMBER OF MINERS AND DAY HANDS EMPLOYED IN THE
SEVERAL COUNTIES DURING 1902 AS COMPARED WITH 1901.

No. miners employed during 1901.	No. miners employed during 1902.	Gain.	Loss.	No. day hands employed during 1901.			No. day hands employed during 1902.			Total.	
				Inside.	Outside.	Total.	Inside.	Outside.	Total.	Gain.	Loss.
3,720	4,043	323		772	445	1,217	910	521	1,431	214	
1,930	2,498	568		373	263	636	459	263	722	86	
319	466	147		87	58	145	125	68	193	48	
1,071	992		79	201	136	336	185	142	327		9
460	469	9		94	65	159	88	53	141		18
23	33	10		5	3	8	7	3	10		2
1,622	1,916	294		578	198	776	676	198	874	98	
204	428	224		15	16	31	48	39	87	56	
52	49		3	5	7	12	4	6	10		2
1,790	1,882	192		283	211	494	399	211	610	116	
2,804	2,825	21		880	353	1,233	1,086	884	1,470	237	
1,288	2,278	990		270	192	462	283	281	564	102	
289	360	71		37	35	72	60	33	93		6
213	194		19	34	35	69	34	29	63		14
278	253		25	39	43	82	45	23	68		2
471	450		21	129	74	203	128	75	201		1
45	70	25		5	3	8	10	10	20	12	
9	5		4	1	1	2		1	1		1
416	452	36		40	30	70	56	41	97	27	
198	170		28	22	15	37	20	23	43	6	
2,714	3,196	482		549	336	885	745	429	1,174	289	
182	215	33		42	37	79	64	39	103	24	
34	22		12	14	12	26	7	4	11		15
2,359	1,861		498	424	392	816	369	345	714		102
234	222		12	42	36	78	45	32	77		1
46	31		15	8	4	12	4	4	8		4
1,885	1,777		108	352	207	559	342	201	543		16
172	263	91		24	21	45	45	34	80	35	
11	7		4	3	4	7	3	2	5		2
62	196	34		24	21	45	41	27	68	23	
24,901	27,613	3,540	828	5,352	3,252	8,604	6,287	3,521	9,808	1,396	192
									Gain	1,204	

NEW MINES OPENED, SUSPENDED AND ABANDONED.

During the year 1902, extending over the inspection year which dates from November 15, 1901, to November 15, 1902, one hundred and five new mines were opened up; sixty-one suspended operations all of the year, and forty-eight were abandoned entirely or worked out.

In comparing these returns with the previous year we find that seventeen more mines were opened up during the year 1902 than during 1901; in the number of suspended mines there was a slight gain of two, while the number of mines reported to have been abandoned shows a loss of ten.

Jefferson county reports the greatest number of new mines where twenty were opened up, a gain of eight; Columbiana and Perry each report ten, Belmont eight and Jackson seven.

The total number of mines that remained suspended is given as sixty-one. Of this number Muskingum reports eight; Columbiana, five; Belmont, Noble, Perry, Tuscarawas each report four; Gallia, Harrison, Jefferson, Mahoning, Monroe and Stark report three each as ceasing operations during the year.

Mines that were reported to be either entirely worked out, or abandoned from unfavorable conditions, are given as forty-eight. Seven of these are attributed to Perry, five to Tuscarawas, and Carroll, Jefferson, and Stark each four.

A large percentage of the new mines opened up during the year 1902 will be worked on an extensive scale, and will be equipped with modern appliances, and electrical machinery.

A detailed list of mines which were opened up, suspended and abandoned during the year is given by counties.

OWING THE NUMBER OF MINES OPENED, SUSPENDED AND
ABANDONED DURING THE YEAR.

Counties.	Opened.	Suspended.	Abandoned.
.....	3	2	.....
.....	8	4	1
.....	5	2	4
.....	10	5	3
.....	4	1	3
.....	.....	3	.....
.....	2	2	.....
.....	2	3	.....
.....	1	.....	.....
.....	1	.....	2
.....	7	1	3
.....	20	3	4
.....	1	1	.....
.....	3	3	1
.....	1	.....	2
.....	3	2	2
.....
.....	.....	3	.....
.....	4	8	3
.....	2	4	2
.....	10	4	7
.....	2	.....	1
.....	.....	1	.....
.....	6	3	4
.....	.....	1	1
.....	1	.....	.....
.....	4	4	5
.....	2	1	.....
.....
.....	3	.....	.....
.....	105	61	48

**DETAILED LIST OF NEW MINES OPENED, SUSPENDED AND
ABANDONED DURING THE YEAR.**

ATHENS COUNTY.

New Mines.	Suspended.	Abandoned.
Modoc	Hastings	
Kimberly No. 7.....	Black Diamond	
Kimberly No. 8.....	.....

BELMONT COUNTY.

New Mines.	Suspended.	Abandoned.
Maple Hill No. 2.....	Reline	Wheeling Creek No
West Wheeling	Electric Light and Pow-	
Trolls No. 1.....	er Co.	
Trolls No. 2.....	Echo	
Glen No. 2.....	Wegee	
Wheeling Creek No. 3..	.....
Weaver .....	.....
Crescent No. 5.....	.....

CARROLL COUNTY.

New Mines.	Suspended.	Abandoned.
Somers No. 7.....	.....
Sandy Valley No. 2....	Starkey No. 2.....	Scotts No. 3.
Bartholomew	Richardson	Sandy Valley Clay
Grier-Beatty	Linden No. 1.
Somers No. 8.....	Starkey No. 2.

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COLUMBIANA COUNTY.

Mines.	Suspended.	Abandoned.
haft	Foster	Rodgers.
.....	Rolley	Heatherington No 1.
.....	Anderson	Manila.
.....	Hill	
bury	Myers	
.....	
alley No. 2 .....	.....
.....	
2.....	.....
Clay .....	.....
rove .....	.....

COSHOCOTON COUNTY.

Mines.	Suspended.	Abandoned.
1.....	Conesville No. 2.....	Franklin West Side.
2.....	.....	Tumblin.
3.....	.....	Conesville No. 2.
4.....	.....

GUERNSEY COUNTY.

Mines.	Suspended.	Abandoned.
11	Barton	
.....	C. C. C.....	

GALLIA COUNTY.

Mines.	Suspended.	Abandoned.
.....	Small	
.....	Morgan	
.....	Evans	

HARRISON COUNTY.

New Mines.	Suspended.	Abandoned.
Roby No. 2..... Roby No. 3.....	Martin Sheets Mattern	

HOLMES COUNTY.

New Mines.	Suspended.	Abandoned.
Jorden	

HOCKING COUNTY.

New Mines.	Suspended.	Abandoned.
Buckeye No. 6.....	Buckeye No. 4. Lost Run.

JACKSON COUNTY.

New Mines.	Suspended.	Abandoned.
Superior No. 9..... Jones No. 3..... Ridgeland White Eye McKell Superior No. 8..... Superior No. 10.....	Gallia Coal & Lime Co..	Jones No. 2. Hippel. Hurd Shaft.

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MEIGS COUNTY.

New Mines.	Suspended.	Abandoned.
Rockville No. 2..... Peacock East..... Peacock North.....	Charter Oak..... Sayles	Glendale. Diamond.

MONROE COUNTY.

New Mines.	Suspended.	Abandoned.
.....	Steel	
	Coats	
	Carlton	

MUSKINGUM COUNTY.

New Mines.	Suspended.	Abandoned.
Dewey No. 2..... Princess New	J. R. Greiner..... Mullen	Dewey No. 1. Diamond No. 2.
Diamond No. 3..... No. 10.....	German	Maynard No. 7.
	Bridwell	
	Barton	
	Horner	
	Trimble	
	Johnson	

NOBLE COUNTY.

New Mines.	Suspended.	Abandoned.
Laura	Vance	Glenwood.
Graham	Daniels	Jumbo.
.....	Markey	
.....	Wilson	

PERRY COUNTY.

New Mines.	Suspended.	Abandoned.
Thacker	No. 13.....	Green Hollow No. 5.
New Crescent No. 2....	No. 47-A	No. 5.
Beech Grove No. 6-E...	Yost	No. 139.
Pine Run.....	Bell	No. 47.
Santoy No. 1.....	.....	Beech Grove No. 6.
Haselton .....	.....	Dew.
Yaw .....	.....	New Crescent.
Hamilton & Wallace No.	.....
1 .....	.....
Hamilton & Wallace No.	.....
2 .....	.....
Northwest .....	.....

PORTAGE COUNTY.

New Mines.	Suspended.	Abandoned.
Hutson No. 4.....	Hutson No. 5.
Mullen Shaft.....	

SCIOTO COUNTY.

New Mines.	Suspended.	Abandoned.
.....	Bennington	

STARK COUNTY.

New Mines.	Suspended.	Abandoned.
Davis & Wolf.....	Lake Erie No. 1.....	West Brookfield No. 6.
Canton	Slusser	Massillon Standard.
White Oak.....	Warstler	White Ash.
Pocock No. 3.....	Crystal Springs.
Brookfield	
No. 17.....	

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SUMMIT COUNTY.

New Mines.	Suspended.	Abandoned.
.....	H. Thomas & Co.....	No. 10 or Fox Lake.
.....	

TRUMBULL COUNTY.

New Mines.	Suspended.	Abandoned.
Picnic	

TUSCARAWAS COUNTY.

New Mines.	Suspended.	Abandoned.
Central Valley.....	Knippert	Eagle Hill No. 1.
Beaver Dam No. 1.....	Dunlavy	Eagle Hill No. 2.
Goshen Central.....	Pennsylvania Iron &	
.....	Coal Co.....	Rock Cut.
Midvale No. 3.....	Somerdale West.....	Tunnel No. 6.
.....	.....	Twin City.

VINTON COUNTY.

New Mines.	Suspended.	Abandoned.
Cornelia No. 2.....	Devault & Son.....	
Clarion .....	.....

WAYNE COUNTY.

New Mines.	Suspended.	Abandoned.
Boak	
New Chippewa.....	
Stewart	

mine officials, who understand their business, and who are fearful of carrying out any idea that will in any way better conditions in mines. Realizing the dangers arising from our present system of mining coal, the department published Mine Rules and Regulations in October 1902, and which we would be glad to see enacted into law, believing they will work no great hardship upon either the miner or operator, human lives are at stake, and the increasing rate of casualties about which we all should be concerned. From reports received from the District Mine Inspectors, great benefit has already been derived from the publication of these rules, but no rule or law, unless rigidly enforced, will bring any lasting benefit. We publish in this report a copy of Mine Rules and Regulations.

SHOWING THE NUMBER OF VISITS MADE IN EACH COUNTY DURING 1902.

Counties.	Number of mines visited once.	Number of mines visited twice.	Number of mines visited three times.	Number of mines visited four times.	Number of mines visited five times.	Number of mines visited six times.	Number of mines visited seven times.	Number of mines visited eight times.	Number of mines visited nine times.	Number of mines visited ten times.	Number of mines visited eleven times.	Totals.
Number Visits.	1	2	3	4	5	6	7	8	9	10	11	
Adair	4	12	10	1	4	4	3	2	...	...	2	165
Antelope	4	5	9	10	2	2	1	...	1	...	...	119
Barber	5	9	1	...	1	1	1	...	...	...	...	44
Bethany	25	8	7	5	...	...	...	2	...	...	...	98
Butler	5	5	...	1	...	...	...	1	...	...	...	27
...	...	2	...	...	...	...	...	...	...	...	...	4
Cheyenne	4	5	2	2	2	2	2	1	...	...	1	83
Converse	1	2	1	...	...	...	...	...	...	...	...	8
...	8	...	...	...	...	...	...	...	...	...	...	8
...	3	2	2	1	2	2	1	1	...	1	...	64
...	19	16	8	5	2	2	...	...	...	...	...	117
...	18	10	5	4	1	1	...	...	...	...	...	80
...	3	1	5	1	...	...	...	...	...	...	...	24
...	13	3	...	3	...	...	1	...	...	...	...	38
...	3	2	...	3	1	...	...	...	...	...	...	24
...	2	6	5	1	2	2	...	...	...	...	...	55
...	...	...	...	...	2	...	...	...	...	...	...	10
...
...	9	8	7	4	1	1	...	...	...	...	...	73
...	5	1	1	...	...	...	...	...	...	...	...	10
...	10	17	9	11	8	2	4	1	1	...	2	234
...	...	...	1	3	...	...	...	...	...	...	...	15
...	15	6	5	9	6	8	1	...	1	...	...	172
...	...	...	1	1	...	...	...	...	...	...	...	7
...	1	2	...	...	...	...	...	...	...	...	...	5
...	11	17	11	1	...	1	1	...	...	...	...	95
...	2	3	1	...	...	...	...	...	...	...	...	11
...	6	...	...	2	...	1	...	...	...	...	...	20
Total	176	142	91	68	34	29	15	8	3	1	5	1,610

TABLE SHOWING THE NUMBER OF VISITS MADE IN EACH DISTRICT DURING THE YEAR 1902.

Districts.	Number of mines visited once.	Number of mines visited twice.	Number of mines visited three times.	Number of mines visited four times.	Number of mines visited five times.	Number of mines visited six times.	Number of mines visited seven times.	Number of mines visited eight times.	Number of mines visited nine times.	Number of mines visited ten times.	Number of mines visited eleven times.	Totals.
Number Visits	1	2	3	4	5	6	7	8	9	10	11	
First district.....	24	21	12	6	4	4	2	1	....	1	....
Second district....	9	21	19	3	6	6	2	2	....	....	2	
Third district.....	24	25	16	15	11	3	4	1	1	....	2	
Fourth district....	14	15	14	13	3	3	1	....	1	....	....
Fifth district.....	21	28	14	4	2	2	2	2	....	....	1	
Sixth district.....	52	24	10	12	1	2	3	2	....	....	....
Seventh district....	32	8	6	15	7	9	1	....	1	....	....
Totals	176	142	91	68	34	29	15	8	3	1	5	1

SCALES TESTED DURING THE YEAR.

Requests made to the department for the purpose of having the inspectors test scales is increasing each year. The weighing of coal is one of the most important factors connected with the mining of coal from the miner's standpoint. When they become possessed of the idea that they are not receiving the correct weight of the amount of coal that should be paid for, dissatisfaction arises and a demand that the scales be tested is made at once.

Of the 154 sets of scales tested during the year 1902, 131 were found to weigh correctly, which fact of itself is convincing that in many instances where complaints are made of unjust weights, they are not well founded. Fifteen sets more were tested during the year 1902 than during 1901. In some instances scales become so much out of repair that it requires the services of an expert scale man to put them in working order. February 17th, the Forsythe mine, owned by the Forsythe Coal Co., near Ford, Ohio, was visited by District Mine Inspector W. H. Turner, for the purpose of testing the scales. The scales were found to be so much out of order that the company complied with the inspector's request to employ the services of an expert scale tester. On July 14, there was a request that the scales of the Klondike mine be tested, the miners being of the opinion that there was some mystery connected with the weight that an expert could solve. By mutual consent of the company the services of an expert were secured and confirmed the decision of the inspector, who had tested the scales and found them accurate. On September 2d, the scales of the Novelty Brick Mine, owned by the Novelty Brick Co., Newcomerstown, Ohio, and located in Tuscarawas county, were tested by the District Mine Inspector, when it was found that the hopper scales were poorly constructed, and would not hold the balance; the run of mine scales were also rusty and needed cleaning. An expert was retained to adjust the Hopper scales, and the run of mine scales were tested cleaned up.

The 154 sets of scales that were tested took place in twenty counties. Stark county reported the greatest number of scale tests, numbering 25; Adams, 24; Belmont, 16, and Hocking, 12. Of the entire number of sets of scales tested during the year 85 1-15 per cent. were found correct and 14-15 per cent. were found to be out of order.

On February 21st, mine cars were measured in Meigs county by District Mine Inspector D. H. Williams as follows: Salisbury Coal Co., near the Rockville or Kings mine, three sizes of cars were measured; June 3rd, the mine cars at the Syracuse Slope mine, owned by the Syracuse Coal & Salt Co., Pomeroy, Ohio, were measured, the cars being of one size.

The Department is contemplating taking up the matter of test weights at all large mines with which to make scale tests, owing to the fact that a great many requests are made by the miners to have scales tested by the Inspector immediately, the miners frequently refuse to work until the scales are tested. The expense incurred to the State in getting the District Mine Inspector with his weights immediately to a mine caused this matter to be brought to the attention of the Department. The idea was suggested that it would be an advantage to the mine operators as well as the Mining Department if test weights could be secured and left in a convenient place at the mine as the Mine Contractor and Mine Boss might test the scales when a dispute arose as to the accuracy of the weight of the scales. The cost entailed to the operators would be little or nothing. We would be glad to have the views of all the operators on this subject.

A detailed list of the number of sets of scales tested during the year 1902 is given by counties, the result obtained, etc. The second table shows the scale tests made from the year 1887 to 1902 inclusive.

INSPECTOR OF MINES.

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Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902				
Jan. 21	Phoenix No. 2.....	Continental Coal Co., Columbus, Ohio....	D. H. Williams.....	Found accurate (2 sets.)
Jan. 28	Imperial.....	Imperial Coal Co., Nelsonville, Ohio.....	".....	Found accurate (2 sets.)
Feb. 28	No. 10.....	Sunday Creek Coal Co., Columbus, Ohio....	".....	Found accurate (2 sets.)
Mar. 11	Luhrig No. 2 and No. 3.....	Luhrig Coal Co., Luhrig, Ohio.....	".....	Found accurate (3 sets.)
Mar. 27	Kimberly No. 1.....	Continental Coal Co., Columbus, Ohio.....	".....	Found accurate (1 set.)
Apr. 24	Oakdale No. 311.....	Continental Coal Co., Columbus, Ohio.....	".....	Found incorrect (1 set.)
May 9	No. 10x (Orbliston).....	Sunday Creek Coal Co., Columbus, Ohio....	".....	In favor of company.
May 19	".....	Sunday Creek Coal Co., Columbus, Ohio....	".....	Found accurate (1 set.)
July 26	".....	Sunday Creek Coal Co., Columbus, Ohio....	".....	Found accurate (2 sets.)
Sept. 15	Luhrig No. 1.....	Luhrig Coal Co., Luhrig, Ohio.....	".....	Found accurate (1 set.)
Sept. 17	Imperial.....	Imperial Coal Co., Nelsonville, Ohio.....	".....	Found accurate (2 sets.)
Sept. 18	Pekin.....	Continental Coal Co., Columbus, Ohio....	".....	Found accurate (1 set.)
Oct. 2	Utley.....	Jennings Coal and Coke Co., Utley, Ohio...	".....	Found accurate (1 set.)
Oct. 8	No. 24.....	Northern Fuel Co., Jacksonsville, Ohio....	".....	Found accurate (1 set.)
Oct. 8	Sedalia.....	Sedalia Coal Co., Glouster, Ohio.....	".....	Found accurate (1 set.)
Oct. 9	No. 16.....	Continental Coal Co., Columbus, O.....	".....	Found accurate (1 set.)

ANNUAL REPORT

SCALES TESTED—Continued.
BELMONT COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901 Nov. 19	Crescent No. 3.....	Lorain Coal and Dock Co., Cleveland, Ohio.	Thomas McGough.....	Found accurate.
Jan. 23	Maple Hill	Maple Hill Coal Co., Barton, Ohio.....	"	Found accurate (2 sets.)
Mar. 13	Crescent No. 3.....	Lorain Coal & Dock Co., Cleveland, Ohio..	"	Found correct (2 sets.)
Apr. 9	Gaylord	Pittsburg & Cleveland Coal Co., Martins Ferry, Ohio	"	Found correct (1 set.)
24	Pipe Creek	Johnson Bros., Dillies Bottom, Ohio.....	"	Found correct (1 set.)
29	Crescent No. 3.....	Lorain Coal & Dock Co., Cleveland, Ohio..	"	Found correct (1 set.)
June 25	Maple Hill	Maple Hill Coal Co., Barton, Ohio.....	"	Found correct (1 set.)
July 28	Wheeling Creek	Lorain Coal & Dock Co., Cleveland, Ohio..	"	Found incorrect (1 set.)
31	Aetna Standard	United States Steel Co., Bridgeport, Ohio.	"	Found correct.
Sept. 16	Taggarts	Barton Coal Co., Barton, Ohio.....	"	Found correct.
24	Crescent No. 1 and No. 2..	Lorain Coal & Dock Co., Cleveland, Ohio..	"	Found correct (2 sets.)
Oct. 14	Buckeye	Buckeye Coal & Mining Co. Flushing, O.	"	Found correct.
24	Greene	Robert Greene, Drill, Ohio.....	"	Found correct.

CARROLL COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
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Date.	Name of Mine.			
1902				
Mich. 26	Cedar Hill	Big Vein Coal Co., Cleveland, Ohio.....	James P. Davis.....	Found correct.
Apr. 10	Pine Hollow	James Ashman, Salem, Ohio.....	"	Found correct.
Aug. 8	Pine Hill	Card & Prosser, Lisbon, Ohio.....	"	Found correct.
Nov. 3	Leetonia	Leetonia Coal Co., Leetonia, Ohio.....	"	Found correct.
Nov. 4	Salem Shaft	Salem Coal Co., Salem, Ohio.....	"	Found incorrect.
COSHOCTON COUNTY.				
Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902				
Mich. 21	Franklin No. 2.....	Columbus Coal & Mining Co., Columbus, O.	W. H. Turner.....	Found correct.
Mich. 21	Tumblin	C. F. Tumblin, Coshocton, Ohio.....	"	Found accurate.
June 17	Cassingham No. 2.....	Coshocton Coal Co., Coshocton, Ohio.....	"	Found accurate.
June 17	Cassingham No. 3.....	Coshocton Coal Co., Coshocton, Ohio.....	"	Found accurate.

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ANNUAL REPORT

SCALES TESTED—Continued.

GUERNSEY COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901 Dec. 19	Forsythe	Forsythe Coal Co., Danford, Ohio.....	W. H. Turner.....	Found incorrect.
23	Trail Run	Ellsworth Coal Co., Cleveland, Ohio.....	"	Found correct.
1902 Feb. 17	Forsythe	Forsythe Coal Co., Danford, Ohio.....	W. H. Turner.....	Found correct.
Oct. 13	Pioneer No. 2	Byesville Fuel Co., Byesville, Ohio.....	"	Found accurate.

HARRISON COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902	Cuyahoga Coal Co., Cleveland, Ohio.....	Thomas McGough.....	Found correct.
	Roby Coal Co., Cleveland, Ohio.....	"	Found correct.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901				
Nov. 16	Coalgate	Continental Coal Co., Columbus, Ohio.....	R. M. Mason.....	Found correct.
Nov. 19	New Pittsburg No. 6.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
1902				
Jan. 25	New Pittsburg No. 1.....	New Pittsburg Coal Co., Columbus, Ohio..	R. M. Mason.....	Found correct.
May 10	New Pittsburg No. 6.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
May 22	New Pittsburg No. 1.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
May 23	New Pittsburg No. 2.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
June 9	New Pittsburg No. 5.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found incorrect.
June 20	New Pittsburg No. 4.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
Aug. 11	New Pittsburg No. 3.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
Aug. 11	Snake Hollow	C. L. Posten & Co., Nelsonville, Ohio.....	"	Found correct.
Aug. 25	New Pittsburg No. 7.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.
Sept. 16	New Pittsburg No. 5.....	New Pittsburg Coal Co., Columbus, Ohio..	"	Found correct.

SCALES TESTED—Continued.

JACKSON COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901 Dec. 5	Superior No. 5.....	Superior Coal Co., Jackson, Ohio.....	R. M. Mason.....	Found correct.
5	Superior No. 7.....	Superior Coal Co., Jackson, Ohio.....	"	Found correct.
1902 May 10	McKell	McKell Coal Co., Berlin X Roads, Ohio..	"	Found correct.
21	Globe	Globe Iron Co., Jackson, Ohio.....	"	Found correct.
Aug. 19	Jones No. 2.....	Jones Coal Co., Jackson, Ohio.....	"	Found correct.
19	Jones No. 3.....	Jones Coal Co., Jackson, Ohio.....	"	Found correct.
21	Chapman	Chapman Coal Co., Jackson, Ohio.....	"	Found correct.
Sept. 3	Hurd Slope	Hippel Coal Co., Jackson, Ohio.....	"	Found correct.
Oct. 9	Symmes	Symmes Creek Coal Co., Remple, Ohio....	"	Found incorrect.

JEFFERSON COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901 Dec. 13	Dillon No. 2.....	Wheeling & Lake Erie Coal Co., Cleve- land.....	Thomas McGough.....	Found correct.
1902 Jan. 30	Connet No. 1			Found correct (2 tests.)

NOV. 11	Russell	Russell Coal Co., Steubenville, Ohio.....	"	Found correct.
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• MAHONING COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902				
Jan. 31	Fairview No. 3	Ohio Coal & Clay Co., Cleveland, Ohio..	James P. Davis	Found incorrect.
Feb. 21	Fairview No. 3	Ohio Coal & Clay Co., Cleveland, Ohio..	"	Found correct.
Apr. 3	Greenamyer Shaft	Zimmerman & Orr, Salem, Ohio	"	Out of order.
Oct. 21	Evans	J. H. Shields, Youngstown, Ohio	"	Found correct.

MEDINA COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902				
Mich. 4	Whalen No. 2	Card & Prosser Coal Co., Cleveland, Ohio.,	W. H. Miller	Found correct.

SCALES TESTED—Continued.

MUSKINGUM COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901 Dec. 18 19 1902 July 15 Oct. 28	Oak Knob Granger No. 10 Granger	Oak Knob Coal Co., Zanesville, Ohio. Siler Coal Co., McConnelsville, Ohio. Muskingum Coal & R'y. Co., Zanesville, O. Siler Coal Co., McConnelsville, Ohio.	D. B. Wilson " " " " "	Found correct. 15 pounds to 100 against the miners. Found correct. Found correct.

MORGAN COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902 Jan. 10	Rose	Carding Coal Co., Rose Farm, Ohio.	D. B. Wilson	Found correct.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902				
Jan. 2	Beech Grove No. 6.....	Opperman Coal Co., Cambridge, Ohio....	D. B. Wilson.....	Found correct.
Jan. 30	Shawnee Valley	Maynard Bros., Columbus, Ohio.....	"	Found correct.
Apr. 17	Midway No. 1.....	Wallace Coal Co., Redfield, Ohio.....	"	Found incorrect.
May 14	Rends No. 3.....	Continental Coal Co., Columbus, Ohio....	"	Found incorrect (2 sets.)
June 16	No. 8	Sunday Creek Coal Co., Columbus, Ohio....	"	Found correct.
July 7	Rends No. 3.....	Continental Coal Co., Columbus, Ohio....	"	Found correct (2 sets.)
July 21	No. 20	Buckeye Coal & R'y. Co., Columbus, Ohio.	"	5 pounds on 100 against the miners; ordered exp.
				ert.
Sept. 2	No. 21	Sunday Creek Coal Co., Columbus, Ohio....	"	Found correct (2 sets.)
	Pine Run	Roberts & Davis, Hemlock, Ohio.....	"	10 pounds on 100 against the miner.

STARK COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901				
Nov. 20	Woodland	Massillon-Cleveland Coal Co., Cleveland, Ohio	W. H. Miller.....	Found correct.
Dec. 9	Oakwood No. 16.....	Massillon Coal Mining Co., Massillon, O..	"	Found correct.
Dec. 11	New Greenville No. 3.....	Massillon Coal Mining Co., Massillon, O..	"	Found correct.

SCALES TESTED—Continued.

STARK COUNTY—Concluded.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902				
Jan. 17	Warwick No. 4.....	Massillon Coal Mining Co., Massillon, O..	"	Found correct.
Feb. 25	Canal Fulton No. 15.....	Massillon Coal Mining Co., Massillon, O..	"	Found correct.
Feb. 1	New Greenville No. 3.....	Massillon Coal Mining Co., Massillon, O..	"	Found correct (2 sets.)
Mch. 24	Crystal Springs	Massillon Coal Mining Co., Massillon, Ohio.	"	Found correct.
27	Oakwood No. 16.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
Apr. 21	Pigeon Run	Pigeon Run Coal Co., Cleveland, Ohio	"	Found incorrect.
22	Woodland	Massillon-Cleveland Coal Co., Cleveland, Ohio	"	Found correct.
May 20	Central No. 7.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
June 18	Eureka	Massillon-Cleveland Coal Co., Cleveland, Ohio	"	Found correct.
20	White Oak	White Oak Coal Co., Cleveland, Ohio.....	"	Found correct.
30	Pocock No. 3.....	Pocock Coal Co., Massillon, Ohio.....	"	Found correct.
July 1	Central No. 7.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
2	New Greenville No. 3.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
14	Stanwood No. 8.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
28	Stark	Stark Coal Co., Canton, Ohio.....	"	Found incorrect.
Aug. 9	Minglewood No. 1.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
Sept. 16	Cassingham	Cassingham Coal Co., Cleveland, Ohio.....	"	Found correct.
24	Canal Fulton No. 15.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
29	Warwick No. 4.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
Oct. 23	Gelse No. 13.....	Massillon Coal Mining Co., Massillon, Ohio	"	Found correct.
Nov. 13	Woodland	Massillon-Cleveland Coal Co., Cleveland, Ohio	"	Found correct.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902 Jan. 18	Fox Lake No. 10.....	Massillon Coal Mining Co., Massillon, Ohio	W. H. Miller.....	Found correct.
TUSCARAWAS COUNTY.				
Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1901 Nov. 19	Huff's Run No. 2.....	Ridgeway, Burton & Co., Cleveland, Ohio.	W. H. Turner.....	Found correct.
1902 Jan. 31	Long Meadow	Ridgeway, Burton & Co., Cleveland, Ohio.	"	Found correct.
Jan. 31	East Goshen No. 1.....	East Goshen Coal Co., Cleveland, Ohio.....	"	Found correct.
Feb. 22	East Goshen No. 2.....	East Goshen Coal Co., Cleveland, Ohio.....	"	Found correct.
June 18	Indian Hill	Hiawatha Coal Co., Uhrichville, Ohio.....	"	Found correct.
	Novelty	Novelty Brick & Mining Co., Newcomers- town, Ohio.....	"	Found incorrect.
18	Novelty	Novelty Brick & Mining Co., Newcomers- town, Ohio.....	"	Run of mine scales accu- rate.
26	Huff's Run No. 2.....	Ridgeway, Burton & Co., Cleveland, Ohio.	"	Found correct.
26	Long Meadow	Ridgeway, Burton & Co., Cleveland, Ohio.	"	Found correct.
Aug. 7	Beaver Dam No. 1.....	Beaver Dam Coal Co., Cleveland, Ohio.....	"	Found inaccurate.

. SCALES TESTED—Concluded.

VINTON COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902 May 8	Seldom Seen.....	Lomax Coal Co., McArthur, Ohio.....	R. M. Mason.....	Found inaccurate.
May 15	Seldom Seen	Lomax Coal Co., McArthur, Ohio.....	"	Found accurate.
Aug. 12	Minerton	John I. Lawler Coal Co., Minerton, Ohio.	"	Found inaccurate.

WAYNE COUNTY.

Date.	Name of Mine.	Name of Company.	By whom tested.	Results.
1902 Jan. 9	West Lebanon	West Lebanon Coal Co., Wooster, Ohio....	W. H. Miller.....	Found correct.
Jan. 27	West Lebanon	West Lebanon Coal Co., Wooster, Ohio....	"	Found correct.
May 29	West Lebanon	West Lebanon Coal Co., Wooster, Ohio....	"	Found correct.
June 18	Billman	Card & Prosser Coal Co., Cleveland, Ohio.	"	Found correct.
Oct. 21	New Chippewa	Wagner Coal Co., Akron, Ohio.....	"	Found correct.

SHOWING THE NUMBER OF SCALES TESTED AND RESULT OF
THE EXAMINATION FROM 1887 TO NOVEMBER 15, 1901.

S.	Number of sets of scales tested.	Number of sets found correct.	Number of sets found incorrect.	Remarks.
.....	74	.....	.....
.....	55	41	14	
.....	48	33	14	
.....	59	46	20	
.....	61	37	25	
.....	86	62	24	8 in favor of company, 6 in favor of miners.
.....	120	81	39	12 in favor of company. 3 in favor of miners.
.....	64	37	27	15 in favor of company, others not known.
.....	96	65	31	15 in favor of company, 14 in favor of miners.
.....	93	65	28	5 against miner, 1 against operator.
.....	77	59	18	3 against miner, 3 against operator.
.....	99	82	17	4 against miner, 1 against operator.
.....	112	93	19	
.....	131	115	16	3 against miner, 1 against operator.
.....	139	115	24	
.....	154	131	23	
.....	1394	.....	.....

PERMANENT IMPROVEMENTS MADE DURING THE YEAR

The number of permanent improvements for the year that has just passed shows a total number of three hundred and three. This is an increase of ninety-five over the preceding year when two hundred and eight were made.

Fifty-nine fans were installed during the year, a gain of fourteen. The fan as a ventilating medium is steadily on the increase, meeting the requirements where a strong current is necessary to distribute the air to all the working places.

Fifty furnaces were built during the year, a gain of ten compared with the number built during the year 1901. This demonstrates the continued popularity of the furnace as a ventilating medium in use in mines of small capacity, and where only small areas are worked; which do not require as large amount of ventilation. Large mines are necessarily compelled to install fans as a method of ventilation as to assist in carrying off quantities of poisonous and noxious gases so detrimental to the health and life of the miner.

Air shafts to the number of ninety-nine were sunk, a gain of two. Twenty stairways and thirty-seven second openings were rendered possible the escape of the men employed in the mines in case of fire or other dangers to which this class of workmen are exposed.

Eight ventilating baskets were hung in air shafts for the purpose of ventilation.

The number of improvements made as shown by the reports of District Mine Inspectors demonstrates the importance of good ventilation which is necessary to the well being of our mines at the present time where hundreds of men are employed daily. Occasionally reports are received of the quality of miners' oil used which vitiates the air and makes it injurious to the health of the miner. Only the very best quality oil should be used, and in this way the miner can assist as in no other way to keep the air of his mine pure and fresh. Any miner found violating in any way hindering the proper ventilation of a mine should not be permitted to mine coal.

Ten speaking tubes were inserted in the shafts of mines, and two one safety catches were applied on cages.

Minor improvements, such as timbering, ordering of break-throws etc., were made at almost all of the mines during the year.

In reviewing the improvements at the mines during the year as reported by the District Mine Inspectors, our attention has been brought to the improvement made at the No. 9 mine, owned by the Buckeye Coal & Co., Columbus, Ohio, and situated in Perry county, in the way of subs

ings for wooden ones. This improvement was suggested by the Superintendent of the mine, and with the consent of Mr. General manager. We believe that if more mines throughout the district follow out this same idea good results would be obtained. In the words of Mr. D. District Mine Inspector, under whose supervision this mine is, "The cost of an improvement is not essentially the first thing to be considered, but that benefits will be derived from that improvement, that is, the most economical for the company during the years of its operation." Experience in this one instance has demonstrated the utility of this method of putting in brick stoppings as it has saved the company money. Many operators apparently center their efforts in equipping their mines with all modern facilities and machinery, but seem to overlook this most important of improvements in mines. The cost of brick could be materially reduced by the large companies manufacturing their own.

In the first district thirty-nine improvements were made; in the second, thirty-eight; in the third, thirty-four; in the fourth, sixty-three; in the fifth, forty-nine; in the sixth, forty-three, and in the seventh, thirty-

TABLE SHOWING THE NUMBER AND CHARACTER OF THE PERMANENT IMPROVEMENTS MADE IN THE MINES OF THE STATE DURING INSPECTION YEAR.

Name of District Inspector.	Furnaces.	Fans.	Air Shafts.	Second Openings.	Safety Catches.	Stairways.	Speaking Tubes.	Ventilating Baskets.
R. M. Mason	7	11	14	5	.....	.....	.....	2
D. H. Williams	4	9	12	3	3	2	3	2
D. B. Wilson	8	7	15	2	.....	.....	.....	2
Thos. McGough	17	12	17	12	1	2	1	1
W. H. Turner	8	6	15	7	5	6	1	1
Jas. P. Davis	5	6	13	8	5	5	1	.....
W. H. Miller	1	8	12	.....	7	5	4	.....
Totals	50	59	98	37	21	20	10	8

**SHOWING THE NUMBER AND CHARACTER OF PERMANENT
IMPROVEMENTS MADE IN THE MINES OF THE STATE FROM 1884 TO
1900 INCLUSIVE.**

Years.	Furnaces.	Fans.	Air Shafts.	Second Openings.	Safety Catches.	Stairways.	Speaking Tubes.	Ventilating Baskets.	Totals.
1884	43	10	45	10	13	12	3	4	53
1885	45	19	22	7	13	8	3	4	122
1886	13	6	50	17	7	12	3	4	63
1887	39	9	52	21	8	12	3	4	113
1888	43	4	57	26	13	19	5	2	141
1889	42	13	66	27	7	19	4	2	146
1890	57	20	66	46	8	11	4	4	212
1891	53	17	55	26	19	19	5	2	194
1892	37	26	65	27	13	7	4	4	181
1893	77	35	131	67	16	19	5	4	354
1894	55	18	106	60	7	11	3	9	269
1895	66	17	105	60	9	11	3	13	284
1896	56	21	93	81	5	7	3	14	280
1897	40	22	75	44	4	7	3	9	204
1898	44	17	73	45	7	11	1	15	213
1899	36	25	60	45	11	13	7	3	200
1900	24	27	69	31	1	9	1	8	170
Total	40	45	66	31	11	5	7	3	208
Total	50	59	98	37	21	20	10	8	303
als	860	410	1,288	655	165	185	59	88	3,710

MINES WHICH GENERATE LIGHT CARBURETTED HYDROGEN GAS.

(FIRE DAMP.)

As the number of new mines opened up during the year increased the number of mines found to generate fire damp also increased. Seventy-five mines, distributed over fourteen coal producing counties, generate fire damp. Carroll and Tuscarawas counties were added to the list. The following new mines given by counties reported the presence of fire damp during the year 1902. In Athens county, Luhrig No. 3, No. 23, and Modoc; Columbiana county, McNab shaft, Foraker shaft and Slope No. 2; Guernsey county, Murray Hill and Detroit; Jefferson county, Zerby shaft; Mahoning county, National; Noble county, Laura; Perry county, Santoy No. 1; Portage county, Mullin shaft; Stark county, Central No. 7. In Carroll county, which, previous to 1902, reported no mines generating fire damp, reported two mines, Somers No. 8 and Heatherington Big Vein. In Tuscarawas county, which was also added to the list, Beaver Dam No. 1 mine was reported.

We regret to report the death of three persons who were killed by an explosion of gas at the Lost Run mine, owned by the Buckeye Coal & R'y. Co., Columbus, Ohio, on November 2, 1902. From information gathered at the time it appeared that an explosion occurred in the mine which was idle, the day of the week being Sunday, about 9 o'clock, and Charles Sampson, a store-keeper, Morris O'Brien, a miner, and M. H. Kennard, a bookkeeper for the company, had evidently entered the mine for the purpose of investigating the cause of the smoke which was issuing from the No. 1 opening of this mine. While traveling on the main north entry between the rope switch and the fifth and sixth east entries, another explosion occurred killing all three men instantly. Word was immediately dispatched the department and as soon as possible, R. M. Mason, Inspector for the district in which the mine is located, and myself, as Chief Mine Inspector, were on the ground. After a thorough investigation as to the cause of this catastrophe, both from witnesses called at the inquest and from other sources obtainable, the theory was advanced that a fire, which had been smouldering for some time in an abandoned portion of the mine, unknown to the managers of the mine, had generated artificial or coal gas. This fire had been bratticed from the rest of the workings. It is presumed that a cave in had destroyed these brattices, thereby admitting the fresh air to the fire which immediately caused a blaze igniting the gas and resulting in the explosion as hereinbefore stated.

**HIGH GENERATE LIGHT CARBURETTED HYDROGEN GAS.
(FIRE-DAMP.)**

	<i>Athens County.</i>	
2.....	Luhrig No. 1.....	Chauncey No. 275.
.....	Luhrig No. 2.....	McLeish No. 31.
.....	Luhrig No. 3.....	No. 23.
.....	No. 16	No. 17.
.....	No. 24	Modoc.
	<i>Belmont County.</i>	
.....	Wegee	Schnegg.
	<i>Carroll County.</i>	
n Big Vein	.....	Somers No. 8.
	<i>Columbiana County.</i>	
.....	Slope No. 2.....	Cedar Hill.
y No. 3....	Lisbon	Pine Hill.
.....	Forker Shaft	Salem Shaft.
.....
	<i>Guernsey County.</i>	
.....	Trail Run	Cisco.
.....	Ideal	Walhounding.
.....	Little Kate	Kings.
.....	Murray Hill	Black Top.
.....	Central	Hartford.
	<i>Jackson County.</i>	
.....	Fluhart No. 3.....	Superior No. 6.
	<i>Jefferson County.</i>	
rght	Rolling Mill No. 2.....	La Belle.
.....	Brilliant	High Shaft.
	<i>Mahoning County.</i>	
.....	.....	Greenamyier Shaft.
	<i>Meigs County.</i>	
.....
	<i>Noble County.</i>	
.....
	<i>Perry County.</i>	
.....	Rend No. 3.....	Chestnut Hill No. 2.

**MINES WHICH GENERATE LIGHT CARBURETTED HYDROGEN
GAS—Concluded.**

	<i>Portage County.</i>	
Hutson No. 4.....	.....	Mullin Shaft.
	<i>Stark County.</i>	
Minglewood No. 1.....	Warwick No. 4.....	Central No. 7.
Minglewood No. 2.....	Warwick No. 5.....	Young's Shaft.
New Greenville No. 3..	Oakwood No. 16.....	Pocock No. 3.
Geise No. 13.....	Woodland .....	.....
	<i>Tuscarawas County.</i>	
Beaver Dam No. 1.....	.....	.....

CHARACTER OF DEVELOPMENT AND MODE OF VENTILATION.

The subject of ventilation being one of the most important, if not the most important, with which those engaged in underground work have to attend, it might be of interest to discuss the matter here in a general way. In our opinion, large sums of money are spent on the ventilation of mines annually which are, in many instances, worse than wasted. A great number of what are now our largest mines were in the beginning intended to have a capacity of from 300 to 500 tons of coal per day output, to mine out an area of from 300 to 500 acres; consequently the air intake and hoisting shaft are located in close proximity to one another; the air courses are small, and all the bratticing on the air courses for a great distance from the inlet of the air are constructed in the cheapest manner possible, and of the cheapest material which were sufficient for the original purpose, but within the past few years large areas have been attached to these mines and the capacity increased to double and triple the original amount of coal produced by these mines. To bring about these results many more miners must be employed, the volume of ventilation must be increased and the air courses lengthened. The pressure against the brattices above referred to becomes so great that leaks are apparent everywhere, and the air that should be carried to the working faces of the mine is lost. In instances of this kind the operators of the mine are put to great expense in constantly closing leaks and maintaining power to supply the necessary volume of air for the workmen. We unhesitatingly venture the assertion that there are many mines in the State where one-half the expense incurred in maintaining long air courses would pay for sinking a new air shaft for an inlet near the workmen, and insure better conditions for all concerned. Again, the question of the size of the air course is too often neglected; slate, refuse and water are permitted to accumulate until the air passages are almost closed, all of which adds greatly to the expense of maintaining ventilation.

In view of the above made statement of affairs now existing in our mines at the present time, we would suggest that as few break-throughs as possible be made on the main air course; temporary brattices can be used until the air conducted from 100 to 300 feet for the expense that would be incurred to make the break-throughs, the only change necessitated being that the entries would be required to be farther ahead of room necks. The existing laws can be complied with by carrying out this plan of ventilation, we believe would result in better ventilation, and the expense incurred reduced.

In the accompanying table will be found the character of development and mode of ventilation employed in the various mines of the State during the year 1902, which exhibits the kind of opening in use to remove coal from the mines, and also to show the method of ventilation employed in the same.

From reports received by this department during the year, there were in operation nine hundred and sixty-seven mines in the State. The various kind of openings in use in these mines is given, with the exception of ninety-six. As a rule, mines failing to state the mode of development employ the drift.

In the year 1902 mines to the number of five hundred and eighty-four employed the drift as a means of reaching the coal. This number decreased, as compared with the preceding year. Perry and Muskingum counties each report 61 mines employing the drift; Belmont 50, Tuscarawas 49, and Jefferson and Noble each 40.

The number of shafts in use during the year was reported to be 140, an increase of 7 over the year 1901.

The following counties in the order named employed the greatest number: Stark 34, Jackson 26. Athens and Guernsey each 13, Mahoning 11.

There was a loss in the number of slopes reported amounting to the total number being 142, whereas the number in 1901 was 149. The greatest number occur in Columbiana, 17; Stark, 15; Athens, Jackson, Mahoning, Medina and Perry, each 11, and Tuscarawas, 10.

Losses to the amount of 36 occur in the mines employing the fan, which is probably due to the fact that more attention is given to the larger mines than to the smaller mines, which as a rule employ the drift. A loss of 7 is found in the number of slopes in use and a gain of 7 in the number of shafts. The number of mines of which we were unable to secure ventilation is also given.

In the second table will be found the various kinds of ventilation in use at the mines throughout the year. Upon examination of same it can be found that 219 fans were in use, a gain of 36 over the number reported in 1901. This number was distributed in 22 counties; while in 1901 only 19 employed the use of the fan. Jackson county reports 31, Athens 31, Belmont and Perry each 21, and Columbiana 19.

There was a loss of 33 in the number of furnaces in use, the number being 222, compared with 253 reported in 1901. They were in use in all the coal producing counties of the State, with the exception of three, viz.: Monroe, Portage and Scioto, the greatest number being in Tuscarawas, 33; Belmont, 23; Muskingum and Stark, each 15; Jackson, 15.

s and exhaust steam were in use to the number of 43, a loss county reported 18, Medina 8, Mahoning 4, and Guernsey, Wayne each 3.

ght fire baskets were in use, a decrease of 19. This method seems to be on the decrease each succeeding year. Twelve from Perry, 8 from Muskingum, 5 from Athens and 4 from

er of mines of which the ventilation is not known was 88, natural ventilation.

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION AND THE THREE KINDS OF OPENINGS.

Counties.	Character of Opening.					Mode of Ventilation.						
	Drift.	Shaft.	Slope.	Small mines, kind of openings unknown.	Totals.	Fan.	Furnace.	Fire basket.	Steam jet and exhaust from pump.	Natural.	Small mines, method of ventilation unknown.	Totals.
Athens	22	13	11	2	48	31	3	5	1	6	2	48
Belmont	50	2	10	6	68	21	23	1	17	7	1	68
Carroll	14	3	4	1	22	3	8	1	2	7	1	22
Columbiana	29	4	17	6	56	19	9	2	1	20	5	56
Coshocton	21	...	...	3	24	...	14	3	4	3	3	24
Gallia	3	...	...	3	6	...	2	...	1	1	3	6
Guernsey	13	13	5	1	32	15	3	1	3	9	1	32
Harrison	28	2	2	7	39	1	3	4	28	3	3	39
Holmes	12	...	...	...	12	...	2	...	10	...	...	12
Hocking	16	...	1	...	17	11	1	2	3	...	...	17
Jackson	27	26	11	5	69	37	15	3	8	6	6	69
Jefferson	40	5	2	8	55	14	12	3	1	17	8	55
Lawrence	19	...	...	4	23	1	7	...	12	3	3	23
Mahoning	4	11	11	5	31	5	4	...	4	13	5	31
Medina .....	...	2	11	...	13	...	2	2	8	1	...	13
Meigs	29	1	2	1	33	4	13	...	15	1	...	33
Morgan	1	...	1	...	2	...	2	...	...	...	...	2
Monroe	1	1	...	3	5	1	...	...	1	3	1	5
Muskingum	61	...	4	10	75	...	18	8	39	10	7	75
Noble	40	2	3	4	49	2	3	3	37	4	4	49
Perry	61	7	11	4	83	21	14	12	32	4	4	83
Portage .....	...	4	...	...	4	3	...	...	1	...	...	4
Scioto	2	...	...	2	4	...	...	...	2	2	...	4
Stark	28	34	15	2	79	16	18	3	18	22	2	79
Summit	3	4	3	1	11	2	2	...	3	3	1	11
Trumbull	1	1	4	...	6	1	1	2	2	...	...	6
Tuscarawas	49	1	10	14	74	8	33	2	20	11	3	74
Vinton	12	1	...	3	16	1	6	...	6	3	3	16
Washington .....	...	...	2	...	2	...	2	...	...	...	...	2
Wayne	3	3	2	1	9	2	2	...	3	1	1	9
Total	589	140	142	96	967	219	222	57	45	336	88	967

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION, AND THE THREE KINDS OF OPENINGS FROM 1892 TO 1902, INCLUSIVE.

Years.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902
shafts	303	676	657	749	821	800	921	789	696	625	589
shafts	91	121	149	150	149	153	143	145	122	133	140
shafts	40	61	61	68	66	85	145	133	140	149	142
shafts, kind of opening unknown	458	151	296	220	167	190	46	65	114	99	96
Totals	892	1009	1163	1187	1203	1228	1255	1132	1072	1006	967
shafts	127	141	139	134	134	149	149	147	171	182	219
shafts	253	323	264	278	281	280	317	274	264	253	222
shafts	11	23	32	36	38	51	45	41	48	40	57
shafts and ex. from pumps ...	30	39	43	48	52	49	47	34	33	44	45
shafts	205	316	378	452	528	516	636	523	453	389	336
shafts, mode of ventilation not known	266	167	309	242	179	200	73	107	103	98	88
Totals	892	1009	1165	1190	1212	1245	1267	1126	1072	1006	967

RULES AND REGULATIONS GOVERNING THE MINES OF THE STATE OF OHIO.

To Persons Interested in the Operation of Coal Mines, and the Persons employed therein:

After carefully investigating the number of accidents reported to the Mining Department of the State of Ohio, we ascertain that the greater number of casualties are due to the carelessness on the part of the persons employed in the mines. On the other hand, the responsibility of these accidents is not altogether removed from the persons who employ these men.

As a general rule, the miners and day hands seem to be governed by no set rules or regulations. In the inspection of mines our attention has been called to the carelessness existing in and about the mines, as exemplified by the fact that men and boys are permitted to ride on empty cars and trips, to loaf around switches and mine doors, and in various other places where their duty or their work does not require them.

In our estimation, all these existing conditions tend to increase the number of accidents and to inflict injury upon those employed in the mines. Again, the propping of roofs is in many instances wilfully neglected until an accident occurs which often terminates fatally to the person who is indifferent to his own safety; blasting material is handled in a criminally careless manner; the ventilation machinery is not properly guarded—in fact, no system seems to be established with which those persons employed in the mines feel they must comply.

We believe the aforesaid conditions exist in a general way in all the mines of the State. As the head of the State Mining Department we feel it our duty, as set forth in Section 292 of the Revised Statutes of the State, to require rules to be established in all the mines, governing those employed therein, and to request a strict compliance of the same.

It would be impracticable to enforce the same rules in all mines, but if the rules embodied in this folder are adhered to so far as conditions will permit, we believe that fewer casualties will be recorded in this office.

Very respectfully,

E. G. BIDDISON, *Chief Insp. of Mines.*

RULES GOVERNING THE MINE BOSS.

In addition to other duties imposed by law and otherwise, the mine must comply with the following rules:

RULE I. The mine boss shall not employ any person to mine coal or do any other work in the mines who is not capable of understanding rules of the mine, and with whom he cannot converse sufficiently well to explain the same.

RULE II. He shall measure the ventilation at the inlet and outlet near the face of all entries upon which men are employed at least each week, and report the same to the Chief Inspector of Mines on first day of each month, as required by law.

RULE III. He shall carefully examine each and every working place in the mine at least every third day, and during the working hours of the day.

RULE IV. He shall see that all proper break-throughs are made between air courses and rooms and provide check doors to direct the current of air to the working face.

RULE V. He shall employ competent men to take charge of the different departments in and about the mine, and establish rules with which the employed shall understand they must comply.

RULE VI. He shall provide the traveling ways and outlets, as required by law, and keep the same in a safe condition.

RULE VII. If his mine generates fire-damp he shall employ a competent man to examine each working place before the men enter and as soon after the work has ceased as the condition of the ventilation will safely permit.

RULE VIII. He shall provide means for those in charge of the different departments to report to him at the end of each shift the condition of hoisting machinery or haulage system, ventilating apparatus (if fan, the number of revolutions per minute), cars, tracks, airways, traveling ways, stock used in mine, supply of timber at each working place, condition of haulage ways, and working places as to safety, and the condition of each and every working place as to ventilation and water.

RULE IX. He shall keep a record of the above reports with their respective dates for each day in the office at the mine for six months from date, which record shall be open to the mine inspectors at all reasonable times.

RULE X. The mine boss shall thoroughly examine at least once every month the worked out and abandoned portions of any mine and make a complete report of his investigation to the Chief Inspector of Mines, setting forth in detail the condition of same as to water, gases, fires, squeezes, etc., and position in regard to the ventilating current.

RULES GOVERNING THE MINERS.

It shall be the duty of the owner or operator of any mine to employ, so far as possible, experienced persons to mine coal or other minerals, and, when such persons are employed they shall adhere strictly to the following rules:

RULE I. They shall carefully examine their working place before beginning to work and shall see that it is in a safe condition for at least fifteen feet from the working face, and in any mine where a fire boss is employed it shall be their duty to examine their working place to see whether the fire boss has left the proper marks indicating his examination thereof, and they shall at all times be careful to keep their working places in a safe condition during working hours. No miner or mine laborer shall work along with or in dangerous proximity to another miner with whom he cannot converse and make acquainted with the common dangers, or the rules of the mine, unless the proper precautions have been arranged to avoid accident, because of the workmen not being able to understand each other.

RULE II. Should any miner at any time find his place becoming dangerous, either from gas or roof or from other unusual conditions, he shall at once cease working, and inform the mine boss or the assistant of the mine boss of such danger, and before leaving such place he shall place some plain warning at the entrance thereto to warn others of such danger.

RULE III. It shall be the duty of every miner to mine his coal properly, and after each blast he shall exercise great care in examining the roof and coal and shall secure them safely before beginning to work.

RULE IV. When places are liable to generate sudden volumes of fire-damp, or where locked safety lamps are used, no miner shall be allowed to fire shots except under the supervision and with the consent of the mine boss, or his assistant, or other competent person designated by the mine boss for that purpose.

RULE V. Workmen and all other persons are expressly forbidden to commit any nuisance, or leave coal, dirt, stone or other rubbish in the airways or rooms so as to interfere with, pollute or hinder the air passing into and through the mine.

RULE VI. When a workman is about to fire a blast he shall be careful to notify all persons who might be in danger thereby, and shall give sufficient warning so that any person or persons approaching shall be warned of the danger.

RULE VII. Whenever a workman shall open a box of powder or other explosive, or while in any manner handling the same, he shall first place his lamp not less than five feet from such explosive, and in such a position that the air current cannot convey sparks to it, and he shall not smoke while handling explosives.

RULE VIII. An accumulation of gas in a working place shall not be removed by brushing. A sufficient current of air must be provided to move the same before the workmen enter.

RULE IX. When gas is ignited by a blast or otherwise the person in charge of the place where the said gas is ignited shall immediately extinguish it, if possible, and if unable to do so shall immediately notify the fire boss or his assistants of the fact. Workmen must see that no gas is left burning upon leaving their working place.

RULE X. No inexperienced person shall be employed to mine out air unless accompanied by and with the consent of one or more experienced miners.

RULES REGULATING THE FIRE BOSS.

In all mines where explosive gas is generated in sufficient quantities to be detected by the ordinary safety lamp, the owner, agent or operator shall employ a competent person to be designated as a fire boss. It shall be the duty of the fire boss to carefully examine every working place, all roadways and traveling ways, to inspect the ventilating apparatus, and see that the air currents are traveling in their proper course, before any men have entered the mine and before each shift. In making such examination the ventilating apparatus shall be examined before the fire boss examines the workings, and he shall use no light other than that enclosed in a safety lamp, while making said examination. In all cases said examinations shall be begun within three hours prior to the appointed time for men to enter the mine, and of each shift, and it shall be the duty of the fire boss at each examination to leave at the face and side of every place so examined evidence of his presence. And he shall also at each examination inspect the entrance or entrances to the worked out or abandoned parts which are adjacent to the roadways and working places of the mine where fire-damp is likely to accumulate; and where danger is found to exist he shall place proper signal at the entrance to such places which shall be sufficient warning for persons not to enter said place.

It shall be unlawful to allow any person except those duly authorized to enter and remain in any part of the mine through which a dangerous accumulation of gas is being passed in the ventilating current from any part of the mine. The fire boss shall frequently examine the edge and accessible parts of new and old gobs and air courses, and shall report at once any violation of this rule to the mine boss.

The fire boss shall at each entrance to the mine or in the main intake roadway near to the mine entrance, prepare a permanent station with the proper danger signal designated by suitable letters and colors placed thereon, and it shall not be lawful for any person or persons, except the mine officials in cases of necessity, and such other persons as shall be

designated by them, to pass beyond the said danger signal station if the mine has been examined by the fire boss as aforesaid, and the same certain parts thereof, reported by him to be safe: and in all mines where operations are temporarily suspended the superintendent and mine shall see that a danger signal shall be placed at the mine entrances which shall be sufficient warning to persons not to enter mine.

RULES GOVERNING THE ENGINEERS.

It shall be the duty of every owner or operator of any mine where machinery is used in operating the same to employ a competent engineer or master mechanic, or both, whose duty it shall be to keep a careful watch over his engine and machinery under his charge, and see that they are properly supplied with water, cleaned and inspected at proper intervals and that the steam pressure does not exceed at any one time the amount allowed by the superintendent, and shall carefully observe the following rules.

RULE I. He shall not allow any unauthorized person to enter engine house, or allow any person to handle or run the engine, without permission of the superintendent.

RULE II. When workmen are being raised or lowered he shall take special precaution to keep the engine well under control.

RULE III. The locomotive engineer must keep a sharp lookout ahead of his engine and sound the whistle or alarm bell frequently coming near partings or landings; he must not exceed the speed allowed by the mine boss or superintendent. He must not allow any person or his attendants to ride on the engine or on cars without the permission of the mine boss.

RULE IV. The master mechanic, engineer or person in charge shall examine all hoisting and ventilating apparatus before the beginning of each shift and shall report the condition of same to the mine boss. He shall further acquaint himself with the signals established by the superintendent regulating the working of the mine.

RULE V. When the ventilating fan is so located that it would be practicable for the engineer to keep a close watch on it at all times the fan must be provided with an attendant whose duty it shall be to see that the fan is kept running when men are in the mine.

RULES GOVERNING GATHERERS, HAULERS, ETC.

All persons engaged or employed in gathering or hauling coal or mineral product from the miners by the use of horses, mules or ropers shall observe the following rules.

RULE I. They shall ride on the rear end of their trip or car, and should they have an occasion to leave their trip, or car, they must be careful to ascertain that it is left when possible in a safe place, secure from cars or other dangers or from endangering drivers of the trip following.

RULE II. They shall also exercise care while taking trips down grade, and see that the brakes or sprags are so adjusted that they can keep the car under perfect control and to prevent them from running into themselves or others. The operators or owners shall provide the necessary brakes or sprags.

RULE III. He shall not leave any cars standing where they may materially obstruct the ventilating current, except in case of accident to the trip.

RULE IV. He shall report to the mine boss or his assistant at the end of each shift the condition of the track, or any loose slate that may be on the haulage way, or anything of practice that in their judgment is dangerous to those employed in the mine.

RULE V. He must not allow any person except his attendants to ride on the cars or trips without the permission of the mine boss.

RULES REGULATING THE FURNACE MEN.

It shall be the duty of every owner or operator of any mine which is ventilated by means of a furnace, when in the judgment of the mine inspector it is deemed necessary to employ a competent person to attend to same, and who shall observe the following rules:

RULE I. He shall see that a fire is in the furnace, sufficient to ventilate the mine, at least one hour before the men enter the same, and shall keep and maintain a clear, brisk fire during the working hours of the mine.

RULE II. He shall promptly obey all instructions given him by the mine boss, and if for any reason conditions render the furnace inadequate to perform its usual work he shall promptly inform the mine boss of the same.

RULE III. The furnace man shall make a report to the mine boss at least once each week, setting forth the condition of the furnace and everything pertaining to same.

GENERAL RULE.

All persons employed at mines must promptly obey all rules and orders issued by the mine boss or his assistants, which affect the general safety of the mine, or the working place in which the person is employed to whom the rule or order is directed.

GENERAL REMARKS.

We feel that we are justified in making the requests herein set forth. The safety of those employed in the mines of the State is in much greater peril than it was five or even one year ago; larger areas are being worked out, more machinery is being installed; more persons are employed, all of which tends to increase the number of accidents and injuries to those employed. Moreover, the best and safest deposits of coal have been mined; on the other hand, the increased demand for coal has caused fields heretofore condemned to be opened up and now are being mined out with greatly increased risks to those employed.

For reasons above set forth, we feel that it is absolutely necessary for the safety and benefit of all concerned that more care must be exercised to prevent accidents. The plea so commonly set forth that it is carelessness on the part of those employed is true to a certain extent, but we believe that it is not true in the greater number of cases.

We do not entertain the opinion that those employed in the mines are more liable to commit suicide than persons engaged in other vocations, so we are forced to the conclusion that in many instances it is ignorance on the part of those receiving injuries. If such is the case, some one is responsible for permitting such persons to take their own lives; some one is responsible for so many widows and orphans.

Permit me to say in conclusion to the mine laborers of the State that they must either confess ignorance of their business, or admit that a greater number of their class of laborers desire to commit suicide than those employed in other vocations. We believe that mine owners, mine managers and mine laborers in general are responsible, to a certain degree, for the accidents which occur in and about the mines, due to the lack of discipline, and wish to insist upon the enforcement of rules at all mines similar to those herein set forth.

POWDER CONSUMED IN THE PRODUCTION OF COAL.

In compiling statistics pertaining to the amount of powder consumed in the mining of coal during the year we do not claim absolute accuracy in the figures given in the accompanying table, as it is almost impossible to obtain the exact amount of powder used, owing to the fact that some miners keep no record of the powder purchased by them or the amount sold to them by the miners. Many miners purchase their own supply of powder and no record is kept of the amount.

Four hundred and ninety-three firms reported the use of powder in their mines during the year 1902, nine less than reported for the previous year. The accompanying table was designed to show the amount of coal produced by the use of powder in the mines of the State by counties. These figures represent the larger portion of the mines where powder is used in mining the coal. Of the 753 firms or persons operating coal mines during the year, 493 report the use of powder in shooting down the coal. Two hundred and sixty firms failed to make any report whatever. When compared with the year 1901, this number represents a loss of 47.

The number of tons of coal produced by this explosive amounted to 149,770, a gain of 5,775,343 tons. The number of kegs of powder used in mining this amount of coal is given at 286,811. This amount of coal represents 86 per cent. of the entire production of the State. The counties Guernsey, Athens, Jefferson and Jackson each reported over 2,000,000 lbs of coal mined by powder, and Perry, Tuscarawas, Hocking and Stark mined over a million by the use of powder. Five fatal, thirteen serious and many minor accidents occurred from the use of powder in the mines during the year, due to premature explosions; two fatal, one serious and two minor accidents occurred from shots blowing through the rib. On June 11, at the Somerdale No. 2 mine, owned by the Somerdale Coal Co., near Cleveland, Ohio, and located in Tuscarawas county, five men were injured in powder smoke igniting, which was due to the men violating the order in firing their shots out of turn; twelve men were employed on a pair of entries 131 feet long, and eight were turning rooms and four were pushing the entries. Twelve shots were fired as fast as they could be lighted, and the last shot ignited the smoke, which had become so thick and rendered so hot that it forced the blaze down the entry 100 feet, burning the men, already stated. Orders were issued by the Inspector concerning the disobedience of this practice of firing shots too soon. If this practice is abated in the future it may be necessary to enact a law requiring shot drills to be employed for this special purpose.

On August 13th the explosion of a keg of powder resulted ultimately in the death of two men employed at the Old Orchard mine, owned by the Morris & Guild Coal Co., Cambridge, Ohio, and located in Guernsey county. George Vandasack, a Slav, was engaged in the act of filling a cartridge from a full keg of powder, preparatory to firing a blast, when it is presumed that a spark from his lamp ignited the powder, causing an explosion. He died on August 14th from the effects of his injuries. George Lesko, also a Slav, was working with him at the time of the accident, and also received injuries from which he died on August 14th. The Coroner's verdict over the body of George Vandasack was as follows:

"After having heard the evidence and examined the body, I do find that the said deceased came to his death by the result of injuries received on the 13th day of August, 1902, by the explosion of a keg of powder, in room No. 23, of entry No. 11, at the Old Orchard mine, which the said deceased George Vandasack was holding under his arm, attempting to fill a cartridge for a shot, and a spark ignited said keg of powder, thereby causing an explosion and injuring himself and also George Lesko, and from his own statement before death I do find that the deceased died on the 14th day of August as a result of gross carelessness on his own part and not from that of any other person or persons.

(Signed.)

"E. E. VORHIES, *Coroner Guernsey County.*"

One of the greatest disasters of the year in the United States resulted from a powder explosion in the Daly West mine, located in Utah, in which thirty-four lives were lost. It was the custom to store large quantities of dynamite underground. This became ignited in some manner, probably by some employe disobeying the rules of the mine and entering the magazine without permission; the exact cause will never be known, as another person was also killed in the explosion which followed, and the fire resulting from the combustion of this vast amount of explosives accumulated throughout the mine and was more destructive in the loss of life than the force of the explosion.

No explosives of any description should be permitted to be stored on the inside of a mine, and strict orders are issued to the District Mine Inspectors of this department to permit no practice of this kind in their respective mines which come under their supervision.

SHOWING THE AMOUNT OF POWDER CONSUMED IN THE MINES
OF THE STATE AND THE NUMBER OF TONS OF COAL PRODUCED TO
THE STATE.

Counties.	Number firms which reported.	Number firms which did not report.	Tons mined by firms which reported.	Number kegs of powder reported as used.	Number tons mined to keg of powder used.
.....	25	5	2,837,035	20,626	137
.....	27	25	907,568	6,215	146
.....	15	4	247,218	4,644	53
.....	34	13	797,130	14,655	54
.....	8	9	376,726	6,645	56
.....	2	.....	26,450	184	144
.....	20	5	2,963,309	17,312	171
.....	13	22	86,057	1,079	80
.....	9	3	14,117	119	118
.....	7	2	1,336,420	4,660	286
.....	46	1	2,242,019	78,881	28
.....	22	20	2,723,800	9,029	301
.....	14	5	147,159	4,768	31
.....	6	20	57,810	1,787	32
.....	10	.....	139,933	4,177	33
.....	23	4	329,106	4,973	66
.....	2	.....	50,437	630	80
.....	1	1	105	6	17
.....	26	37	233,885	7,119	33
.....	26	18	15,195	224	68
.....	37	25	1,876,274	21,421	87
.....	2	.....	97,928	3,742	26
.....	2	1	8,345	312	27
.....	35	22	1,095,717	36,377	30
.....	9	1	192,236	3,654	25
.....	2	4	6,609	280	24
.....	51	7	1,558,884	27,833	56
.....	11	3	98,883	2,920	34
.....	.....	2	.....	.....	.....
.....	8	1	93,415	2,539	36
.....	493	260	20,449,770	286,811	71 2-7

DETAILED MINING SCALE FOR HOCKING VALLEY.

(Sub-District No. 1 of District No. 6.)

Effective during the scale year, from April 1, 1900, to April 1, 1901; renewed and continued March 6, 1901, to be effective from April 1, 1901, to April 1, 1902; and by agreement entered into February 25-26, 1902, at Athens, Ohio, by and between the Ohio State officials of U. M. W. of A. and the operators of the said district by their duly authorized representatives, to be

Effective from April 1, 1902, to April 1, 1903.

PICK MINING RATE per ton of screened lump coal.....	\$ 80
Run of mine, 5-7 lump price.....	57 1-4
ENTRIES—Dry entries, per yard.....	2 00
Break-throughs in entries	2 00
Break-throughs in rooms	1 39
Room turning	3 03
Timber men, per day.....	2 23
Track layers, per day.....	2 23
Track layers' helpers, per day.....	2 10
Pipe men, per day.....	2 23
Trappers, per day	1 00
Cagers, drivers, machine haulers, water haulers and all other inside day labor, per day.....	2 10
Dumpers and trimmers, per day.....	2 10
Couplers, greasers, slack haulers, firemen, engineers, carpenters, blacksmiths, cleaners, hostlers and other outside day labor.	} Special prices according to nature of work.

MACHINE.

Cutting; by Jeffrey styles of machine, in ROOMS, per ton.....	09
Cutting; by Jeffrey styles of machine, in ENTRIES	12 1/4
Cutting; by punching machine, in ROOMS	13 1/4
Cutting; by punching machine, in ENTRIES	14 1/4
Loading; in ROOMS, per ton	41
Loading; in ROOMS, with hand drilling, per ton.....	44
Loading; in ENTRIES	51 1/2
Loading; in ENTRIES, with hand drilling	54 1/4
Loading, break-throughs in entries	Entry price
Loading, break-throughs in rooms	48 1/4
Loading, break-throughs in rooms, with hand drilling.....	51 1/4
Drilling by hand	03
Drilling by machine	02 1/4
Room turning, cutter and loader.....	Entry price

RULES AND CONDITIONS GOVERNING THE HOCKING DISTRICT FROM APRIL 1, 1902, TO APRIL 1, 1903.

SECTION I.—TURNS.

There shall be no free turns allowed to either rooms or entries. The entries shall be driven as fast as operators desire or conditions permit, but in no case shall entry miners be allowed more cars per week than room miners, and at least once each week the turn shall be made uniform for the time previously worked. If, however, the regular turn will not allow cars enough to drive the entries as fast as desired, the operators shall increase the number of miners in each entry, so that, by giving to each the regular turn, the entries shall be driven as fast as two miners could do with full work. If, however, the room men decline to take their place in the entries when requested to do so by the operators, then the entry men shall have free turns until the entries are driven the required length; nothing in the foregoing to prevent fast turns.

SECTION II.—LIMIT ON MINE CARS.

No limit of weight shall be placed on loading mine cars, and in case of loss in transit the company shall not be held responsible, except where cars are broken by employees or where a wreck occurs, the average weight shall be made good by the company. In order that miners cannot take advantage of this clause, the mine manager and committee of any mine where complaint is made of loading cars over their capacity shall mutually agree on a standard height of loading cars.

SECTION III.—CHECK OFF.

The system of checking off for the United Mine Workers' organization remains in force and must be observed, same to be checked off by percent of earnings. The above to include all dues and assessments for burial fund and United Mine Workers' organization.

SECTION IV.—CLAY VEINS.

Where clay veins, roll in bottoms, or horse-backs exist, the price for removing same shall be determined between loader, mine boss and mine committee.

SECTION V.—BOTTOMS, SPRAGS, ETC.

All machines shall be fitted with front shoe not to exceed two and one-half inches in thickness, and the machine men be required to cut coal level

and close to bottom; and in no case shall thickness of bottom exceed 1 inches, except in case of pots or other extreme variations; and all machine men leaving more bottom than above must lift the same or it shall be lifted at their expense.

Where the mine boss or superintendent orders left a greater thickness than four inches the company shall take care of it, and where the bottom is sulphurous and unmarketable the miner may call the attention of the mine boss to it and endeavor to arrive at an agreement for its removal or retention. If the mine boss and miner fail to reach an agreement as to compensation or otherwise, the matter shall be submitted to the superintendent and mine committee for adjustment. In case of sprags being removed by a machine man, he shall be notified by loader, and if he refuse to remove the same, the loader shall remove same and be allowed fifty cents for so doing; the said fifty cents to be deducted from machine runner. When any machine runner leaves six or more sprags in any one place, the same shall be removed from machine and his services be disposed of as deemed best by the general superintendent.

SECTION VI.—ROOMS.

All rooms shall be thirty feet wide with two tracks in each room where practicable. Where rooms have to be cut twenty-four feet wide under to eighteen feet, same shall be paid three cents per ton extra. No extra to affect pillars or entries. Each two men shall be given two rooms where practicable.

SECTION VII.—BLACKSMITHING.

Machine loaders are not to be charged for blacksmithing.

SECTION VIII.—PICK MINE NECKS.

In opening rooms in pick mines where narrow work exceeds eight feet before widening room, all in excess of eighteen feet shall be paid for at entry price.

SECTION IX.—WET PLACES.

Where the mine boss and miner fail to agree as to whether the working place is wet and entitled to extra pay, it shall be referred to the committee and mine boss or superintendent, and if adjudged wet, three cents per ton additional shall be paid.

SECTION X.—MINE IDLE ON ACCOUNT OF IDLE MEN.

If four men are out of cutting or drilling at work time in the morning and upon investigation by mine boss and committee it is found to be

22

e company, the mine shall be shut in the event of the
committee.

SECTION II — U.S.

company shall remove the slate from the working faces of the
d if the company fails after being notified the slate shall be
to remove such slate and be paid damages as the jury deems
ween the mine boss and miner ~~insert in the space of~~ the

SECTION XII.—DRAFTS AND NOTES.

ity-five cents per yard shall be paid to the contractor for the material and break-throughs between ~~the~~

SECTION III — 724

toppage shall take place at any time or manner of the company or violation of agreements or failure of employees to pay the day day without an explanation, and the manager may report to the mine boss and superintendent and an appropriate action permitted, and failing to act, then the manager is liable to the boss and operators.

SECTION 11 - 11 : : -

[illegible]

good coal docked to be ~~placed~~ in the ~~area~~ ~~of~~ ~~the~~ ~~docks~~.
arranged that checkweighing ~~be~~ ~~done~~ ~~at~~ ~~the~~ ~~docks~~.

SECTION 7 - ~~SECRET~~ - ~~CONFIDENTIAL~~

he company insist on the matter, we shall pay for all coal lost by reason of

SECTION XVI.—BREAK-THE-ICE: 121, 22.

at all break-throughs between runs
or three cuts by a six-foot machine

SECTION XVII.—MEMBERS' SONS.

All things being equal, sons of members of the United Mine ~~W~~^{or} of America, when becoming of proper age, shall be allowed the ~~pre~~^{fer}ence of going into the mine, same to be a part of this agreement.

Signed :

For Operators—

J. M. ROAN.

E. B. PEDLOW.

D. E. RITCHIE.

D. C. THOMAS.

C. G. NEWTON.

For Miners—

W. H. HASKINS.

D. H. SULLIVAN.

MICHAEL COLLINS.

THOMAS CAIRNS.

JOSEPH RICHARDS.

Attest :

F. S. BROOKS.

HISTORICAL RECORD SINCE THE CREATION OF THE DEPARTMENT.

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>Chief Inspectors.</i>						
Andrew Roy	Trumbull	Wm. Allen, D.	April 6, 1874	April 6, 1878	4 years	Resigned.
Jas. D. Poston, D.	Hocking	R. M. Bishop, D.	April 6, 1878	Nov. 15, 1879	1 yr. 7 mos.	Not confirm. by Senate.
David Owens, D.	Trumbull	R. M. Bishop, D.	Nov. 15, 1879	Feb. 12, 1880	3 months	
Andrew Roy, R.	Jackson	Chas. Foster, R.	Feb. 12, 1880	Feb. 16, 1884	4 years	Resigned.
Thos. B. Bancroft, D.	Gallia	Geo. Hoadley, D.	Feb. 16, 1884	April 1, 1888	4 yrs. 1½ mo.	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Joseph B. Foraker, R.	Apr. 1, 1888	April 30, 1888	1 month	
Robt. M. Haseltine, R.	Mahoning	Joseph B. Foraker, R.	May 1, 1888	April 30, 1892	4 years	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Wm. McKinley, Jr., R.	May 1, 1892	April 30, 1896	4 years	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Asa S. Bushnell, R.	May 1, 1896	April 30, 1900	4 years	Incumbent.
Elmer G. Biddisson, R.	Athens	Geo. K. Nash, R.	May 1, 1900	April 30, 1904	.....
<i>District Inspectors.</i>						
Jacob J. Klein, R.	Stark	Chas. Foster, R.	June 4, 1881	Jan. 26, 1883	2 yrs. 7½ mo.	Resigned.
John P. Williams, R.	Trumbull	Chas. Foster, R.	Jan. 26, 1883	Feb. 16, 1884	1 yr. 21 days.	Resigned.
Austin P. King, Jr. D.	Columbiana ..	Geo. Hoadley, D.	Feb. 16, 1884	April 30, 1886	2 yr. 2½ mo.	Resigned, held over as no appointment was made at expiration of term, May 1, 1887.
Wm. Dalrymple, D.	Athens	Geo. Hoadley, D.	May 1, 1884	Mar. 1, 1888	3 yrs. 10 mo.	Resigned.
Wm. A. Davis, D.	Guernsey	Geo. Hoadley, D.	May 1, 1884	Feb. 15, 1886	1 yr. 9¼ mo.	Resigned.
Joseph L. Morris, R.	Coshocton	Joseph B. Foraker, R.	Feb. 15, 1886	June 1, 1889	3 yrs. 2½ mo.	Resigned.
D. J. Harry, R.	Jackson	Joseph B. Foraker, R.	April 1, 1888	April 30, 1888	1 month	Reappointed.
D. J. Harry, R.	Jackson	Joseph B. Foraker, R.	May 1, 1888	April 30, 1891	3 years	
David E. Evans, R.	Meigs	Joseph B. Foraker, R.	May 1, 1888	April 30, 1891	3 years	
Jas. W. Haughee, R.	Athens	Joseph B. Foraker, R.	May 1, 1888	April 30, 1891	3 years	
Robert Bell, R.	Stark	Joseph B. Foraker, R.	May 8, 1888	April 30, 1887	11 mos. 23 d.	Reappointed.
Robert Bell, R.	Stark	Joseph B. Foraker, R.	May 1, 1887	April 30, 1888	1 year	Reappointed.

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT.—Continued.

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>District Inspectors—Continued.</i>						
Robert Bell, R.....	Stark	Joseph B. Foraker, R.....	May 1, 1888	Aug. 11, 1890	2 y. 3 m. 11 d	Resigned.
Ebenezer Lewis, D..	Summit	Jas. E. Campbell, D....	Aug. 11, 1890	April 30, 1891	8 mos. 20 d..	Reappointed.
Ebenezer Lewis, D..	Summit	Jas. E. Campbell, D....	May 1, 1891	April 30, 1894	3 years	Reappointed.
Thos. H. Love, R....	Carroll	Joseph B. Foraker, R.....	June 1, 1889	Aug. 1, 1891	2 yrs. 2 mos..	Reappointed.
Thos. H. Love, R....	Carroll	Wm. McKinley, Jr., R.....	July 15, 1892	April 30, 1894	1 y. 9 m. 15 d	Reappointed.
Thos. H. Love, R....	Carroll	Wm. McKinley, Jr., R.....	May 1, 1894	Feb. 15, 1898	3 yrs. 9½ m..	Resigned.
Wm. B. Rennie, D...	Tuscarawas ..	Jas. E. Campbell, D....	Aug. 1, 1891	July 15, 1892	11 mo., 15. d.	Resigned.
Jno. E. Short, D.....	Hocking	Jas. E. Campbell, D....	May 1, 1891	May 7, 1894	3 yrs., 7 dya.	Resigned.
Adam P. McDonald, D.	Perry	Jas. E. Campbell, D....	May 1, 1891	July 15, 1892	1 yr., 2½ mo	To take effect July 15,
Wm. H. Turner, D...	Guernsey	Jas. E. Campbell, D....	May 1, 1891	April 30, 1894	3 years	before entering on
Jas. W. Haughee, R..	Athens	Wm. McKinley, R.....	June 17, 1892	June 28, 1892	Apptd, reorg.	his duties.
Robt. H. Miller, R..	Perry	Wm. McKinley, R.....	July 15, 1892	April 30, 1894	1 yr. 9½ mos	Reappointed.
Robt. H. Miller, R..	Perry	Wm. McKinley, R.....	May 1, 1894	July 13, 1898	4 yrs. 2½ mo	Reappointed.
Alexander Beattie, R.	Athens	Wm. McKinley, R.....	July 15, 1892	July 15, 1895	3 years	Reappointed.
Alexander Beattie, R.	Athens	Wm. McKinley, R.....	July 15, 1895	July 15, 1898	3 years	Reappointed.
Jno. P. Jones, R.....	Stark	Wm. McKinley, R.....	July 15, 1892	July 15, 1895	3 years	Reappointed.
Jno. P. Jones, R.....	Stark	Wm. McKinley, R.....	July 15, 1895	Dec. 31, 1897	2 yrs. 5½ mo	Resigned.
Saml. Llewellyn, R..	Jackson	Wm. McKinley, R.....	May 9, 1894	May 21, 1897	3 yrs. 12 da..	Reappointed.
Saml. Llewellyn, R..	Jackson	Asa S. Bushnell, R.....	May 21, 1897	May 19, 1900	2 y. 11 m. 28 d	Reappointed.
Thos. McGough	Belmont	Wm. McKinley, R.....	May 1, 1894	April 30, 1897	3 years	Reappointed.
Thos. McGough	Belmont	Asa S. Bushnell, R.....	May 1, 1897	June 1, 1900	3 yrs. 1 mo..	Reappointed.
			May 1, 1900	April 30, 1903	3 y. 11 m. 1 d	

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>District Inspectors</i> Concluded.						
Wm. K. Moore.....	Stark	Asa S. Bushnell, R....	July 15, 1898	May 30, 1900	1 y. 10 m. 15d	Resigned.
Jas. P. Davis.....	Carroll	Asa S. Bushnell, R....	Feb. 16, 1898	April 30, 1900	2 y. 10 m. 15d	Reappointed.
Jas. P. Davis.....	Carroll	Asa S. Bushnell, R....	Jan. 1, 1901	April 30, 1903	2 yrs. 4 mos	Incumbent.
Lucius W. Hull.....	Athens	Asa S. Bushnell, R....	July 15, 1898	July 15, 1899	1 year	Resigned.
David B. Wilson.....	Perry	Asa S. Bushnell, R....	July 15, 1898	June 1, 1900	1 y. 10 m. 15d	Reappointed.
David B. Wilson.....	Perry	Geo. K. Nash, R....	June 1, 1900	April 30, 1903	2 y. 10 m. 29d	Incumbent.
David H. Williams..	Athens	Asa S. Bushnell, R....	July 15, 1899	July 15, 1901	2 years	Reappointed.
David H. Williams..	Athens	Geo. K. Nash, R....	July 15, 1901	July 15, 1904	3 years	Incumbent.
R. M. Mason.....	Hocking	Geo. K. Nash, R....	May 21, 1900	April 30, 1903	2 y. 11 m. 9 d.	Incumbent.
Wm. H. Turner.....	Guernsey	Geo. K. Nash, R....	June 1, 1900	April 30, 1903	2 y. 10 m. 29 d	Incumbent.
Wm. H. Miller.....	Stark	Geo. K. Nash, R....	June 1, 1900	July 15, 1901	1 yr. 14 days	Reappointed.
Wm. H. Miller.....	Stark	Geo. K. Nash, R....	July 15, 1901	July 15, 1904	3 years	Incumbent.

MINE MAPS.

Two hundred and sixty-seven maps were filed with the Department during the year 1902. This number represents a gain of ten as compared with the preceding year, and also the largest number that was ever filed during any one year since the law requiring mine maps to be filed with the Department was passed. The enactment of a law requiring that mines shall be surveyed and mapped once every year was a wise one, and this feature of the Mining Department has come to be one of the most important of any which is connected with it. The greatest difficulty seems to be the inability of the operators to secure the services of competent and reliable engineers to do the work. Many maps of mines are retarded and delayed long past the time of filing on account of the lack of mining engineers.

If a mine is to be abandoned or has been entirely worked out efforts are at once centered on securing a copy of the latest map made of the mine, as it is of the utmost importance in the laying out and planning of new mines on undeveloped property to know just how far the underground workings of a mine that has been abandoned extends.

While the workmanship on some of the maps filed with the Department do not come up to the standard required by law, the majority of the mining engineers making surveys of mines throughout the State endeavor to have their maps show a high standard of excellence, and an examination of some of the maps on file will convince any one that we have some excellent mining engineers. The greatest difficulty is experienced from the fact that in many instances the section lines will be omitted; on others the property owners and date of extension, certificate of the mining engineer making the survey, railroads, etc., will not be placed on the map. These are some of the most essential and important features connected with the subject, and we would be glad to see the mining engineers take more pains in filing maps to see to it that all of these essential features are exhibited on their maps before sending them in. However, we are glad to say that this number represents the minority and not the majority of maps filed with this Department.

The total number of maps on file in the Department at the close of the year 1902 was 1,434.

A detailed list of maps filed during the year 1903 will be found in the report for that year. Also a table showing the number of maps on file prior to 1888 and 1897, and the number filed during each succeeding year.

Perry county filed the greatest number of maps during the year 1902, the total being 39; Athens, 30; Jackson, 26; Jefferson, 22; Stark, 20; Tuscarawas, 20; Belmont, 17; Columbiana, 17; and Guernsey, 13. A small mine does not come under the law requiring maps. Unless excavation exceeds 15,000 cubic yards no attention is given to them.

LIST OF MAPS OF MINES FILED DURING THE YEAR 1902, BY
COUNTIES.

	<i>Athens County.</i>	
.....	No. 21	No. 53.
.....	No. 57	Carbondale Nos. 2 and 3.
e No. 4.....	No. 6	No. 10.
lf Moon.....	No. 10x	No. 24.
.....	Federal Valley No. 1....	Sedalia.
.....	Luhrig No. 1.....	Belle Run or No. 55.
.....	Luhrig No. 2.....	Elm Rock.
.....	Nelsonville S. P. Co. ..	Big Run.
.....	Doanville No. 1.....	McLeish.
7.....	Jobs No. 23.....	New Pittsburg No. 5.
	<i>Belmont County.</i>	
.....	Wheeling Creek No. 1..	Aetna Standard.
o. 2.....	Walnut Hill No. 2.....	Maple Hill.
o. 3.....	Taggarts	Flushing.
.....	Tin Plate	Buckeye.
. 1.....	Pipe Creek	Pultney.
. 2.....	.....
. 6.....	.....
	<i>Carroll County.</i>	
.....	Magnolia	Linden No. 6.
6.....	Beatty No. 2.....	Heatherington No. 2.
	<i>Columbiana County.</i>	
.....	Cedar Hill	New Shaft.
alley No. 6...	Wheat Hill	Cherry Valley No. 3.
alley No. 7...	Salem	Folts.
Slope.....	Card & Prosser No. 4...	Oak Hill Drift.
2.....	Lisbon	Prospect Hill No. 2.
.....	Peerless	
	<i>Coshocton County.</i>	
o. 1.....	Franklin No. 1.....	Morgan Run No. 3.
n	Wade No. 2.....	
	<i>Gallia County.</i>	
.....	
	<i>Guernsey County.</i>	
.....	Walhounding	Trail Run.
.....	Forsythe	Kings.
.....	Imperial	Old Orchard.
.....	Black Top	Ideal.
. 2.....	.....
	<i>Harrison County.</i>	
f	Tippecanoe	Roby No. 1.

DETAILED LIST OF MAPS FILED DURING THE YEAR, ETC.—Contd

	<i>Hocking County.</i>	
New Pittsburg No. 1...	New Pittsburg No. 6...	Lost Run.
New Pittsburg No. 2...	New Pittsburg No. 7...	Columbus.
Snake Hollow	Brush Fork No. 2.....	
.....	Brush Fork No 3.....	
	<i>Jackson County.</i>	
Superior No. 1.....	Chapman	Jones No. 2.
Superior No. 2.....	Grace	Northern.
Superior No. 3.....	Springfield	Jones & Morgan No.
Superior No. 4.....	Tom Corwin No. 1.....	Wainwright.
Superior No. 5.....	Machine Coal Co.....	Buckeye.
Superior No. 6.....	Standard	Comet.
Superior No. 7.....	Emma New	Price.
Superior No. 8.....	Emma No. 3.....	Star No. 4.
.....	Enterprise	Crescent.
	<i>Jefferson County.</i>	
Dillon No. 2.....	Long Run No. 1.....	High Shaft.
Forest City	Brilliant	Calumet Coal.
McFayden	Great Western Coal.....	Calumet Clay.
Conner No. 1.....	Forest City Clay.....	Markle Clay.
Conner No. 2.....	Glen Run No. 1.....	West Pittsburg.
Rush Run	Glen Run No. 2.....	Ohio Valley Clay.
Jefferson No. 1.....	Empire Clay	Ohio Valley Coal.
Jefferson No. 2.....	.....
	<i>Lawrence County.</i>	
Kelley	Hall	
	<i>Mahoning County.</i>	
Urmson	Greenamyer Shaft	Fairview.
	<i>Medina County.</i>	
Card No. 3.....	Wagoners	Easter.
Card No 4.....	Klondike	Robbins.
Whalen No. 2.....	.....
	<i>Meigs County.</i>	
Syracuse Shaft	Kings or Rockville.....	Lewis.
Syracuse Slope	Koehler	
	<i>Morgan County.</i>	
Rose .....	.....
	<i>Muskingum County.</i>	
Blue Rock	Cannelsville	Granger.
.....	Diamond No. 3.....	No. 10.
	<i>Noble County.</i>	
Glenwood .....	.....

LIST OF MAPS FILED DURING THE YEAR, ETC.—Concluded.

	<i>Perry County.</i>	
No. 3.....	No. 5	No. 8.
.....	Rends No. 3.....	Upson No. 1.
e No. 6.....	Congo No. 1.....	Hemlock or No. 20.
.....	Congo No. 2.....	New Crescent.
No. 5.....	Bristol No. 1.....	No. 75.
.....	No. 11	No. 51.
.....	No. 77	No. 9 North and South.
.....	No. 47	No. 49.
No. 1.....	No. 79	No. 12 or Spring Valley.
.....	No. 35	Lyonsdale New.
.....	No. 18	No. 22 or No. 9.
No. 1.....	Keystone No. 2.....	Lady Grange.
No. 3.....	Keystone No. 3.....	
	<i>Portage County.</i>	
5.....	Hutson No. 4.....	Hutson No. 6.
	<i>Stark County.</i>	
No. 4.....	Pleasant Valley	Woodland.
aft	Crystal Springs	Stanwood No. 8.
ft No. 1.....	McGinty	Elm Run No. 3.
illon No. 9..	Central	Elm Run No. 4.
.....	Minglewood No. 2.....	Stark.
.....	Crescent	C. & O. B.
Fire Brick...	Pocock No. 3.....	H. B. Camp.
	<i>Summit County.</i>	
.....	Fox Lake No. 10.....	
	<i>Trumbull County.</i>	
.....	
	<i>Tuscarawas County.</i>	
North	Midvale No. 2.....	Eagle Hill.
West	Midvale No. 4.....	Trenton.
No. 2.....	Midvale No. 5.....	Massillon Peacock.
Stillwater...	Twin City	Shanesville.
n No. 1.....	Indian Hill	Thompson Run East.
n No. 2.....	West Goshen	Thompson Run West.
.....	
	<i>Vinton County.</i>	
.....	Oreton or Eagle.....	Elk Fork.
Rock.....	.....
	<i>Wayne County.</i>	
.....	Billman	West Lebanon.

TABLE DESIGNED TO EXHIBIT THE NUMBER OF MAPS THAT HAVE BEEN FILED AS THEY OCCUR IN EACH COUNTY IN THE STATE FROM 1874 TO 1902, INCLUSIVE.

Counties.	Maps Filed.									Total number.
	Prior to 1884.	Prior to 1888.	Prior to 1894.	During 1897.	During 1898.	During 1899.	During 1900.	During 1901.	During 1902.	
Athens	10	.....	28	23	10	20	13	27	30	16
Belmont	6	.....	8	17	10	6	13	15	17	9
Carroll .....	.....	2	5	.....	6	2	2	2	6	2
Columbiana	12	1	8	23	6	3	9	16	17	9
Coshocton .....	.....	.....	3	5	4	1	4	7	5	1
Gallia .....	.....	.....	.....	1	.....	.....	.....	.....	1	.....
Guernsey	2	.....	4	7	1	10	13	12	13	1
Harrison .....	.....	.....	.....	1	1	.....	.....	.....	3	.....
Holmes .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hocking	1	3	12	8	3	5	2	13	10	1
Jackson	1	.....	8	15	22	17	17	36	26	1
Jefferson	2	.....	7	10	1	11	10	13	22	.....
Lawrence	3	.....	4	2	2	.....	7	2	2	.....
Mahoning	4	.....	13	7	2	4	.....	4	3	.....
Medina	1	2	5	1	3	3	6	2	7	.....
Meigs	6	.....	8	6	.....	.....	5	12	5	.....
Morgan .....	.....	.....	1	1	.....	1	.....	2	1	.....
Monroe .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muskingum .....	.....	.....	4	6	7	6	6	6	5	.....
Noble .....	.....	1	.....	.....	1	.....	.....	1	1	.....
Perry	10	.....	17	18	13	35	20	30	39	1
Portage .....	.....	.....	4	.....	1	4	3	3	3	.....
Scioto .....	.....	.....	.....	1	1	.....	.....	1	.....	.....
Stark	7	.....	21	11	15	10	21	20	22	1
Summit	3	1	7	2	.....	1	1	2	1	.....
Trumbull	10	1	10	2	.....	.....	.....	.....	1	.....
Tuscarawas	1	1	10	6	7	10	20	29	20	1
Vinton	2	.....	.....	2	.....	1	2	2	4	.....
Washington .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Wayne	1	.....	1	3	3	2	2	2	3	.....
Totals	82	12	188	178	119	152	177	257	267	14

PRODUCTION OF FIRE CLAY DURING THE YEAR.

The Fire Clay Industry of the State for the year 1902 enjoyed the same degree of prosperity as was shown in the Coal Industry, only not so marked a degree, as it will be seen from the results received from statistics compiled and given in the following table. The total amount of clay produced amounted to 1,528,829 tons, a gain of 191,648 over the previous year. The Industry appeared to have revived over the conditions reported in 1901, as that year showed a decrease of 135,907 tons.

Gains are noticeable in all branches of the industry, not only in the amount of fire clay produced, but in the number of persons engaged and time worked. The number of counties reporting fire clay produced remained the same as in 1901, Wayne making no returns and Vinton being added to the list. Gains are shown in ten counties, while losses occur in eight.

The number of miners engaged in the mining of fire clay was 959, a gain of 161. The number engaged in the manufacture of fire clay was 1,016, a gain of 205.¹ The amount of fire clay purchased was 14,878 tons, a gain of 10,072. The total gains amounted to 355,480 and the total losses 63,832 tons.

Stark county appears to be the largest producer of fire clay, making a return of 289,250 tons in 1902 and 280,097 tons in the year 1901. Tuscarawas reported 258,420 tons, showing the immense gain of 133,119 tons over the preceding year. Jefferson county produced 234,468 tons; Columbus, 171,395; Athens, 111,216; and Hocking, 107,834 tons. The greatest gains occur in Tuscarawas, 133,119, Jefferson 89,418, and Scioto 39,786 tons. The greatest losses occur in Summit county, 125,963, Lawrence 41,818, and Muskingum 9,671 tons.

The average time worked in the fire clay mines was 181 days, a gain of 11 days as compared with the time worked in 1901.

TABLE SHOWING FIRE CLAY OUTPUT OF THE STATE DURING THE YEAR 1902 AS COMPARED WITH 1901.

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Counties.	1901.					1902.					Employees.				Output.	
	No. days worked.	No. men employed.	No. hands engaged in the manufacture.	No. tons mined.	No. tons purchased for manufacturing wares.	No. days worked.	No. men employed.	No. hands engaged in the manufacture.	No. tons mined.	No. tons purchased for manufacturing wares.	Gain in miners.	Loss in miners.	Gain in hands employed in manufacture.	Loss in hands employed in manufacture.	Gain in tons mined.	Loss in tons mined.
Athens	259	48	183	118,347	.....	245	44	172	111,216	.....	.....	4	.....	11	.....	7,131
Carroll	156	47	184	87,960	.....	211	65	238	99,896	.....	18	.....	54	.....	11,936	.....
Columbiana ..	245	93	398	143,259	.....	216	116	284	171,395	.....	23	.....	.....	114	28,136	.....
Guernsey .....	.....	.....	.....	.....	.....	116	10	22	1,383	.....	10	.....	22	.....	1,383	.....
Hocking	164	34	187	75,760	.....	230	53	153	107,834	.....	19	.....	.....	34	32,074	.....
Holmes	169	6	20	6,037	.....	170	12	12	5,060	.....	6	.....	.....	8	.....	977
Jackson	175	11	73	9,930	.....	306	12	90	11,110	3,600	1	.....	17	.....	1,180	.....
Jefferson	250	94	478	145,050	.....	286	119	694	234,468	.....	25	.....	216	.....	89,418	.....
Lawrence	140	17	.....	21,370	.....	.....	.....	.....	8,952	.....	.....	17	.....	.....	.....	.....
Mahoning	78	21	23	11,333	4	92	14	33	8,740	.....	.....	7	10	.....	.....	.....
Muskingum ..	103	29	106	31,221	.....	86	17	.....	21,550	.....	.....	12	.....	106	.....	2,593
Perry	144	28	90	33,111	.....	143	29	98	42,406	.....	1	.....	8	.....	9,295	.....
Scioto	208	58	168	38,792	200	250	143	393	78,578	9,678	85	.....	225	.....	39,786	.....
Stark	273	150	579	280,097	.....	291	133	658	289,250	.....	.....	17	79	.....	9,153	.....
Summit	256	61	865	204,524	.....	230	51	633	78,561	1,600	.....	10	.....	232	.....	125,963
Tuscarawas ..	210	81	436	125,301	.....	251	140	536	258,420	.....	59	.....	100	.....	133,119	.....

Wayne	235	4	20	4,500	959	4,016	1,528,829	14,875	247	86	731	526	355,430
Totals ..	798	3,811	1,337,181	4,806	196	161	205	191,648
Average Gain	181

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TABLE SHOWING THE FIRE CLAY PRODUCTION OF THE STATE FROM
JANUARY 1, 1884, TO DECEMBER 31, 1902.

Years.	Output. Tons	Gain.	Loss.
1884	168,208	.....	.....
1885	153,756	.....	14.6
1886	266,709	112,953	.....
1887	366,476	99,767	.....
1888	471,794	105,313	.....
1889	574,129	102,335	.....
1890	833,159	259,030	.....
1891	1,087,560	254,401	.....
1892	1,253,110	165,550	.....
1893	1,032,348	.....	220.7
1894	942,913	.....	89.4
1895	844,832	.....	97.0
1896	827,450	.....	17.3
1897	822,727	.....	4.7
1898	1,026,922	204,195	.....
1899	1,173,697	146,775	.....
1900	1,473,088	299,391	.....
1901	1,337,181	.....	135.3
1902	1,528,829	191,648	.....

IRON ORE PRODUCTION.

From the report now in press on the Iron and Steel Trade for the year by Mr. James M. Swank, United States Geological Survey, shows a good increase in the annual domestic production of pig iron, the increase of 1902 over the year 1901 being 1,942,953 tons, or 12.24 per cent. Total production for the year 1902 is given at 17,821,307 long tons, as compared with 15,878,354 in the year 1901 and 13,798,242 during the year 1900.

The number of furnaces in blast is given at 307, as compared with 297 in 1901 and 232 in 1900. At the close of 1902, 105 furnaces were out of blast, many being temporarily banked on account of the lack of fuel.

It is estimated that 80 per cent. of the iron ore of the United States is from the Lake Superior region, exceeding all past records. There is to be no well-founded proof that the mines composing this famous region would be exhausted in a short time, as was prophesied not many years ago.

The output of iron ore in Ohio is on the decrease with each succeeding year, only 10,681 tons being mined during the year 1902. This amounts to a loss of 30,644 tons when compared with the output of the year 1901.

This amount was produced in the counties of Lawrence and Scioto, Adams and Vinton making no returns of ore mined whatever. Both counties show losses.

The accompanying table represents the output of iron ore for the years 1901 and 1902 respectively, also the loss occurring in each. The following table is designed to show the iron ore production from the year 1900 to 1902, inclusive.

TABLE SHOWING THE PRODUCTION OF IRON ORE BY COUNTIES DURING THE YEARS 1901 AND 1902, AND THE LOSS AND GAIN IN EACH COUNTY.

Counties.	1901.	1902.	Gain.	Loss.
Jackson	5,000	.....	.....	5,000
Lawrence	21,463	9,041	.....	12,422
Scioto	14,839	1,640	.....	13,199
Vinton	23	.....	.....	23
Total	41,325	10,681	.....	30,644

TABLE SHOWING THE IRON ORE PRODUCTION OF THE STATE FROM 1884 TO 1902, INCLUSIVE.

Years.	Blackband.			Hematite.			Totals.
	Output Tons.	Loss.	Gain.	Output Tons.	Loss.	Gain.	
1884 .....	.....	.....	.....	.....	.....	.....	27,000
1885	70,931	.....	.....	188,646	.....	.....	259,577
1886	83,947	.....	13,012	260,537	.....	71,891	344,380
1887	87,965	.....	4,018	289,500	.....	28,963	371,483
1888	82,054	5,911	.....	171,298	118,202	.....	289,500
1889	70,398	11,656	.....	182,011	.....	10,713	263,762
1890	41,848	28,550	.....	127,240	54,771	.....	181,011
1891	15,540	26,308	.....	52,444	74,796	.....	133,240
1892	8,680	6,860	.....	81,042	.....	28,598	115,480
1893	3,837	4,843	.....	64,423	16,619	.....	72,240
1894 .....	.....	3,837	.....	58,043	6,380	.....	64,423
1895 .....	.....	.....	.....	93,051	.....	35,008	128,059
1896 .....	.....	.....	.....	70,765	22,286	.....	93,051
1897 .....	.....	.....	.....	50,267	20,498	.....	70,765
1898 .....	.....	.....	.....	51,659	.....	1,392	53,051
1899 .....	.....	.....	.....	25,359	16,800	.....	42,159
1900 .....	.....	.....	.....	52,266	.....	26,907	79,173
1901 .....	.....	.....	.....	41,325	10,941	.....	52,266
1902 .....	.....	.....	.....	10,681	30,644	.....	41,325
Totals	465,204	87,965	17,030	1,870,559	371,937	.....	2,611,052

LIMESTONE PRODUCTION FOR THE YEAR.

The Limestone Production for the year 1902 would indicate that this important industry of American products was not up to the standard of many others, as the returns show losses in all of the various classifications, with the exception of two. The accompanying table was designed for the purpose of showing the amount of limestone produced in the various classifications, the average time worked during the year at the quarries, number of persons engaged in the industry, etc. Forty-one counties report the production of limestone during the year. There was a loss in the number of men employed amounting to 189. The time worked is given as 10 days. These counties represent a total output of 652,990 tons of 2,000 pounds each, burned for lime, a gain of 98,467 tons. There appears to have been a greater activity in the classification of limestone burned for lime and kilning than any other of the classifications, as gains appear in both, while losses occur in all the others. The greatest gains in limestone burned for lime was reported from Erie, amounting to 74,500 tons; Sandusky, 65,788; Tawa, 39,648; and Wood, 27,516. The counties representing the greatest losses are as follows: Delaware, 70,527 tons; Montgomery, 32,585; and Marion, 23,236.

The amount of limestone used for fluxing during the year amounted to 1,489,974 tons, a gain of 70,887 tons, as compared with the preceding year. The greatest gains occur in Ottawa, 46,158 tons; Erie, 34,641; and Stark, 24,308. Losses appear in Marion, 25,273 tons; and Scioto, 13,132.

Under the classification of the limestone industry which is devoted to dimension stone a loss is found amounting to 225,809 tons. The total amount quarried for fluxing is given as 93,186 tons. Miami county reports the greatest loss, 111,235 tons; Stark, 33,997; and Franklin, 25,923.

The amount quarried for building stone purposes, as shown by the returns received, is given at 273,140 cubic yards, the total loss aggregating 172 cubic yards, the greatest of which occur in Seneca county, 32,055; Putnam, 10,255; and Greene, 9,306.

The amount of limestone quarried for piers and protection for 1902 is given at 108,074 cubic yards, showing a loss of 26,800 when compared with the year 1901. Erie reported a loss of 19,541 and Seneca 10,000 cubic yards.

Losses amounting to 32,135 square feet of limestone quarried for paving stone occurred during the year in the counties of Allen, Highland and Miami. The total amount in paving amounted to 42,337, a loss of 1,175 square feet. The total amount of limestone used for flagging was 5,904 square feet, a loss of 37,273. The greatest occurred in Miami

county, where it amounted to 20,500 square feet; Highland, 19,272; and Scioto, 6,648.

Twenty-five thousand, three hundred and twenty-one lineal feet of curbing was used during 1902, a loss of 12,507, Miami returning a loss of 6,771, Greene 3,000, and Clark 2,195 feet. The number of cubic yards for macadam purposes was 1,386,104, a loss of 165,274 yards. Van Wert shows the greatest loss, where it amounted to 173,593; Logan, 59,132; Erie 50,404; and Paulding, 28,000 cubic yards.

Counties.	Average num worked.	Number of employed.	Tons of 2,000 burned for	Number tons fluxing. lbs. each bl	Cubic feet o ston stone.	Cubic yards ary buildin	Cubic yards and protect poses.	Square feet	Square feet	Lineal feet of	Cubic yards c and macada
Adams	27	1	70	...	...	100	...	...	...	...	161
Allen	198	146	70	...	...	9,033	...	20,000	...	...	78,470
Belmont	60	4	210	...	...	...	...	...	...	...	...
Butler	170	10	...	...	...	2,241	65	...	...	...	...
Clark	229	199	26,711	67,718	14,238	33,987	1,758	300	...	457	23,293
Clermont	120	4	...	...	...	1,600	...	...	...	...	406
Crawford	110	37	56	...	...	123	...	55	108	...	32,006
Clinton	142	18	...	...	50	1,988	100	200	...	...	5,043
Delaware	249	60	8,748	...	14,375	12,150	...	787	...	200	7,250
Darke	190	6	945	...	...	...	...	...	...	...	...
Erie	224	435	136,496	204,728	8,500	11,402	61,338	1,200	8,100	...	9,845
Franklin	234	394	106	387,099	1,845	24,694	...	...	500	900	264,623
Greene	149	32	8,890	...	...	310	...	...	...	...	4,500
Hamilton	197	82	...	...	...	14,791	...	...	...	...	16,012
Hancock	158	60	...	...	...	6,785	...	...	...	...	44,806
Hardin	202	131	2,625	...	...	109	...	...	...	...	178,700
Highland	176	43	...	...	5,000	3,001	1,860	2,000	1,695	580	11,124
Holmes	10	4	...	...	...	1,500	...	...	...	...	...
Jackson	45	4	...	1,150	...	...	...	...	...	...	...
Lawrence	168	80	...	46,957	...	...	...	1,360	...	...	...
Logan	113	36	1,486	5,117	100	40,868
Lucas	180	12	3,768	5,192
Marion	233	351	57,190	81,603	9,035	24,438	...	4,300	142,378

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PRODUCTION OF LIMESTONE IN OHIO DURING 1902—Concluded.

Average number days worked.	Number of men employed.	Tons of 2,000 lbs. each burned for lime.	Number tons of 2,000 lbs. each burned for fluxing.	Cubic feet of dimension stone.	Cubic yards of ordinary building stone.	Cubic yards for piers and protection purposes.	Square feet flagging.	Square feet paving.	Lineal feet of curbing.	Cubic yards of ballast and macadam.
189	143	15,444	4,250	11,500	31,523	11,450	16,000	500	14,600	16,895
133	83	6,440	.....	.....	20,841	130	2,250	100	1,535	27,847
208	4	170	.....	.....	.....	.....	.....	.....	.....	150
275	783	172,180	718,471	.....	1,263	28,720	.....	.....	.....	123,807
73	21	.....	.....	.....	1,820	.....	.....	.....	.....	10,000
200	2	.....	.....	1,500	80	.....	500	.....	6,000	.....
20	3	105	.....	.....	.....	.....	.....	.....	.....	100
101	74	1,750	.....	12,500	21,219	2,500	1,650	.....	.....	437
99	46	126	.....	.....	5,741	.....	13,400	18,900	300	9,480
267	43	1,248	43	4,758	6,138	153	1,612	11,934	616	13,256
282	66	81,360	.....	.....	12,846	.....	.....	.....	.....	14,710
167	145	43,000	.....	8,400	7,848	.....	400	500	33	106,856
217	15	43,250	.....	.....	.....	.....	.....	.....	.....	.....
140	30	.....	7,955	.....	.....	.....	.....	.....	.....	.....
200	2	1,568	.....	.....	.....	.....	.....	.....	.....	.....
145	203	42	.....	.....	2,714	.....	.....	.....	.....	185,202
152	134	44,191	.....	.....	4,020	.....	.....	.....	.....	12,977
201	3,946	652,990	1,489,974	93,186	273,140	108,074	65,904	42,337	25,321	1,386,104

Counties.	Days.		Men.		Lime.		Fluxing.		Dimension.		Building.		Protection.		Flagging.		Paving.		Curing.		Macadam.
	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	
Adams	32	43	1	39		63					60	1,364		1,647	12,000		32,135			10,339	
Allen	60		4		70														6,501		
Belmont	32			9	210							3,803	65	1,129		893		2,195		27	
Butler		1	14			348	24,308	3,932			7,810	2,312								15,617	
Clark	35			2								903					108			2,086	
Clermont	50		15	15		146					466						500			1,794	
Crawford	51		12	12							7,700	2,306								1,877	
Clinton	12										17,625										
Delaware		2		7	70,627																
Darke	16		1		140																
Erie	55	23	129		74,500		34,641				7,300	5,248		19,541		4,400	8,100			50,404	
Franklin		22	22		135	17,782					25,923	170				1,000	500		108,374		
Gallia	50		50				600				3,100	9,306		1,450		3,000	150			5,150	
Greene	7		10	30	7,190							37	75						9,398	802	
Hamilton	15		5			989					1,650	518							50,773		
Hancock	13		3			315															
Hardin	22			57	5,375		150														
Highland	19			57		10,417					1,312	7,002	19		19,272	7,455			22,921		
Holmes	10		4								1,500									1,800	
Jackson	10			7		518															
Lawrence	24			12			12,258	485				2,651			350					59,132	
Logan	54		71									1,493									
Lucas	80		4								11,811				2,800	1,000		3,539			
Marion	24	60			23,236		25,273	9,035												12,394	
Miami	12	18			10,764		1,150				111,235	1,148	5,656		20,500	5,800		6,771		1,045	
Montgomery			1			32,585					16,142	7,556	136		1,981	73		1,225	16,846		
Muskingum	50		2																		
Mercer	72		1		560						1,003	1,156							100		
Ottawa	59		83		39,648		45,158												22,270	28,000	
Paulding				59																	
Pickaway	75										325	80		83		100		4,025			
Pike					10																
Preble	10		10			875					8,500	8,262	1,885			250			100		
Putnam	44					21															
Ross	28		28																	2,193	
Sandusky	3		43		1,248						6,138	10,255	153		3,400	18,900	300	2,070	2,193	3,880	
Seneca	45		19		65,788		43				4,758				1,612	11,994	616		13,256		
Summit				3		517					4,221								8,590		
Stark	175	6	13								10,600	32,055	10,000	90		500		287	5,441		
Scioto	81		49								33,397	7,557									

Years.	Average number days worked.	Number of men employed.	Number tons of 2,000 pounds each burned for lime.	Number tons of 2,000 pounds each burned for fluxing.	Cubic feet of dimension stone.	Cubic yards of ordinary building stone.	Cubic yards for piers and protection purposes.	Square feet of flagging.	Square feet of paving.	Lineal feet of curbing.	Cubic yards of ballast and macadam.
1886	149	2,383	517,270	328,080	566,697	295,231	63,050	187,900	154,636	60,650	186,810
1887	182	2,767	619,027	478,674	950,393	385,247	78,932	350,954	289,195	139,174	416,018
1888	165	3,025	602,074	666,481	1,795,038	.....	78,381	580,901	313,855	205,227	445,770
1889	165	2,631	849,442	235,298	898,886	364,685	69,876	413,400	586,361	209,339	354,544
1890	171	2,445	689,827	308,521	333,077	270,367	81,414	673,850	507,313	165,434	432,650
1891	143	3,286	744,946	284,478	634,901	361,637	65,295	417,855	4,948,939	200,756	622,194
1892	132	3,353	631,049	217,981	1,057,157	323,600	48,102	171,567	2,883,208	101,820	764,784
1893	149	2,929	396,690	108,376	748,712	290,614	57,374	226,654	393,383	209,327	757,142
1894	138	2,484	349,631	240,173	1,393,792	181,722	22,839	206,736	312,868	144,042	435,764
1895	127	3,829	1,175,988	429,632	500,648	253,900	48,675	573,634	640,836	152,873	650,217
1896	132	3,186	397,162	623,544	260,289	215,900	29,114	137,579	163,373	71,236	553,329
1897	131	3,398	481,871	320,437	371,741	248,392	97,548	145,331	113,025	55,168	629,044
1898	132	3,149	624,921	571,029	605,172	368,348	47,762	71,606	43,256	52,940	729,896
1899	142	3,165	626,274	791,701	405,112	264,640	87,099	100,133	81,796	57,091	864,349
1900	141	3,680	547,046	882,426	166,276	274,919	120,264	131,837	64,170	40,550	1,268,416
1901	154	4,135	554,523	1,419,087	318,995	304,312	134,784	103,177	48,512	37,828	1,551,378
1902	181	3,946	652,990	1,489,974	93,186	273,140	108,074	65,904	42,337	25,321	1,386,104
Gain	27	.....	98,467	70,887	.....	.....	.....	.....	.....	.....	.....
Loss	.....	189	.....	.....	225,809	31,172	26,800	37,273	6,175	12,507	166,274

CASUALTIES DURING THE YEAR.

The total number of accidents of all classes reported during the year was 532, a slight increase of 18, as compared with the preceding year. Of this number 81 resulted fatally, 298 were of a serious nature, and 153 were of minor consequence. Taking into consideration the coal tonnage for the year, the amount of machinery that is annually being introduced into the mines of our State, to say nothing of the number of imported laborers who find employment in them, ignorant of the first principle of mining, we feel that there is cause for congratulation that the death rate is as low, and the number of accidents as few as the records of this Department show.

Eighty-one fatal accidents were reported; nine more than was returned for the previous year. As the tonnage of coal for the year is given at 23,929,267, the number of tons of coal mined to the life lost would aggregate 293,818, or one life lost to every 482 persons employed, while the number of tons mined to the life lost in the year 1901 amounted to 282,240, showing that more tons of coal were mined to the life lost during 1902 than 1901.

Although there are 30 coal-producing counties in the State, fatal accidents occurred in only 18. Of this number Perry and Guernsey report 10 each, Jefferson 9, Hocking 8, and Athens and Jackson 7. These six counties furnish 62 26-27 per cent. of the total number of fatalities recorded for the year. Perry county shows a gain of 6 in the number of fatal accidents, Hocking 5, and Harrison 3. Tuscarawas shows a loss of 8, Jackson 5, and Portage 3.

Serious accidents to the number of 298 occurred during the year, a gain of 22 being reported from 22 counties. Athens county reported 55, a gain of 28; Belmont and Guernsey each 30, Belmont showing a loss of 3 and Guernsey a loss of 14, as compared with the preceding year. Summit shows a gain of 4, and Tuscarawas 3.

The minor accidents for the year number 153. An accident is considered of minor consequence when the person injured is not prevented from performing his duty for more than three weeks. Thirteen less minor accidents occurred during 1902 than in 1901. Athens county shows a gain of 8 in minor accidents, Guernsey 7 and Hocking 4. Tuscarawas shows a loss of 11, Jackson and Meigs each 8, and Jefferson 5.

On September 29, at the New Pittsburg No. 3 mine, Hocking county, two men were seriously injured and three slightly by a trip rope breaking. Ted Desler had both legs broken and Guy Holmes had his foot crushed. Sol Taylor, Bern Jack and Bruce Morrow escaped with their feet being

ghtly injured. Fortunately, no fatalities resulted in what might have been a very serious accident.

From queries sent out to the different District Mine Inspectors as to what suggestions they could offer that would tend to lessen the number of fatal accidents occurring in our mines, we quote the following:

One says: "In order to lessen the number of accidents that occur in mines I would suggest that more precaution be taken in the matter of timing and setting timbers. Most of the accidents occur from falls of roof and coal, due to the miner not setting a prop in time; they either wish to load one more car or lay down a length of track before setting an important prop or post. The proverbial recklessness of man when habitually exposed to dangers on all sides is undoubtedly the cause of so many fatal accidents. Even the most experienced miner will at times become careless. Again, the careless handling of explosives by some of the miners is almost criminal."

Another one says. "I would suggest that more care be exercised by the miners in carefully securing their working places. I would also suggest that the mine boss visit the working places of the men oftener, and specially in mines where the roof is known to be dangerous."

Another has the following timely remarks to make on this most important subject: "From the Coroners' inquests and reports of fatal accidents, from my personal knowledge about three out of every five are due to the carelessness on the part of the employe. I believe that the fatal accidents would decrease 50 per cent. if miners would only be more careful and exercise their own judgment, and not rely upon that of some one else. While some mine foremen are very careless in regard to the safety of the men in their employ, the majority of them are interested in their welfare. It is an impossibility for a mine foreman to see every dangerous place as soon as it presents itself. A man who has no judgment, and does not know whether a stone is loose, or the roof in a dangerous condition, should not be employed unless a competent person is working with him."

The following remarks are made by another: "I know of nothing more to suggest than has already been given, unless it would be some method by which all suggestions such as timbering and posting be promptly done, and to avoid the dangerous practice of men getting under standing shots, and the careless handling of explosives. This would require parental and even hourly attention from some men. This could only be accomplished by a competent person being in charge and with authority to act and enforce rules. I believe all day laborers should be instructed by their employers to be vigilant in watching accruing dangers and caring for same as they are performing their other duties, not fearing to pull down a loose rock or

stopping to take care of some danger, even should it cause a delay in the operation of the mine."

These suggestions and remarks are given by the District Mine Inspectors and from personal observation and knowledge of conditions as they exist in our mines at the present time. If the ideas and suggestions contained in the same were made of practical use in the mines throughout the State, no doubt the year 1903 will have fewer accidents to record.

SHOWING THE NUMBER OF FATAL, SERIOUS AND MINOR ACCIDENTS AND THE NUMBER OF EACH CLASSIFICATION THAT OCCURRED IN EACH COUNTY.

Counties.	Fatal.	Serious.	Minor.	Total.
.....	7	55	20	82
.....	6	30	14	50
.....	2	2	.....	4
na	5	9	5	19
l .....	.....	6	1	7
.....	10	30	23	63
.....	3	3	.....	6
.....	8	18	9	35
.....	7	28	13	48
.....	9	23	15	47
.....	2	1	3	6
.....	1	2	2	5
.....	.....	.....	1	1
.....	.....	5	2	7
.....	.....	1	.....	1
im	1	2	1	4
.....	1	.....	.....	1
.....	10	26	10	46
.....	.....	5	5	10
.....	6	26	23	55
.....	1	4	2	7
.....	.....	20	3	23
as	1	1	1	3
on .....	.....	1	.....	1
.....	1	.....	.....	1
s	81	298	153	532

TABLE SHOWING A COMPARISON OF THE CASUALTIES OF 1902 AS COMPARED WITH 1901.

Counties.	1901.				1902.				Gain. Loss.
	Fatal.	Serious.	Minor.	Total.	Fatal.	Serious.	Minor.	Total.	
Athens	5	27	12	44	7	55	20	82	38
Belmont	5	33	12	50	6	30	14	50	0
Carroll	2	1	2	5	2	2	.....	4	.....
Columbiana	3	8	9	20	5	9	5	19	.....
Coshocton	1	6	4	11	.....	6	1	7	.....
Gallia .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guernsey	11	44	16	71	10	30	23	63	.....
Harrison .....	.....	3	.....	3	3	3	.....	6	3
Holmes .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hocking	3	18	5	26	8	18	9	35	9
Jackson	12	30	21	63	7	28	13	48	.....
Jefferson	8	21	20	49	9	23	15	47	.....
Lawrence .....	.....	3	1	4	2	1	3	6	2
Mahoning .....	.....	.....	1	1	1	2	2	5	4
Medina	2	4	.....	6	.....	.....	1	1	.....
Meigs	1	4	10	15	.....	5	2	7	.....
Morgan .....	.....	.....	.....	.....	.....	1	.....	1	1
Monroe .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muskingum	1	1	1	3	1	2	1	4	1
Noble .....	.....	2	1	3	1	.....	.....	1	.....
Perry	4	24	13	41	10	26	10	46	5
Portage	3	3	2	8	.....	5	5	10	2
Scioto .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stark	3	25	20	48	6	26	23	55	7
Summit .....	.....	.....	.....	.....	1	4	2	7	7
Trumbull .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuscarawas	8	17	14	39	.....	20	3	23	.....
Vinton .....	.....	.....	.....	.....	1	1	1	3	3
Washington .....	.....	.....	.....	.....	.....	1	.....	1	1
Wayne .....	.....	2	2	4	1	.....	.....	1	.....
Total	72	276	166	514	81	298	153	532	83

SHOWING THE COMPARISON OF THE ACCIDENTS OCCURRING
DURING 1901 AND 1902.

Counties.	Fatal.		Serious.		Minor.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
.....	2	.....	28	.....	8	.....
.....	1	.....	.....	3	2	.....
.....	.....	.....	1	.....	.....	2
na	2	.....	1	.....	.....	4
l .....	.....	1	.....	.....	.....	3
.....	.....	1	.....	14	7	.....
.....	3	.....	.....	.....	.....	.....
.....	5	.....	.....	.....	4	.....
.....	.....	5	.....	2	.....	8
.....	1	.....	2	.....	.....	5
.....	2	.....	.....	2	2	.....
.....	1	.....	2	.....	1	.....
.....	.....	2	.....	4	1	.....
.....	.....	1	1	.....	.....	8
.....	.....	.....	1	.....	.....	.....
m .....	.....	.....	1	.....	.....	.....
.....	1	.....	.....	2	.....	1
.....	6	.....	2	.....	.....	3
.....	.....	3	2	.....	3	.....
.....
.....	3	.....	1	.....	3	.....
.....	1	.....	4	.....	2	.....
.....
as .....	.....	8	3	.....	.....	11
.....	1	.....	1	.....	1	.....
on .....	.....	.....	1	.....	.....	.....
.....	1	.....	.....	2	.....	2
.....	30	21	51	29	34	47

SOURCES TO WHICH ACCIDENTS ARE ATTRIBUTABLE

The following extracts of editorials appearing in *Mines and Miners* from time to time are herewith given in connection with sources to which mine accidents are attributable, believing that they will be beneficial and instructive to all persons interested in the mining industry, if the sound judgment contained in them is but made of practical use. The subject of these editorials was, "Shall Mine Foremen Be Certified?" defending the position that they should be, and giving reasons for this. Stand that the death rate and number of explosions and fatal accidents would be materially reduced if only educated and skilled mine foremen were employed, as more than most persons in like positions, holds the lives of a large number of his fellow-men in his hands.

"The death rate attending the mining operations in the United States has always been high. This is not attributable to the introduction of machinery into the mines to a larger extent than has been the case in other countries, but largely to the carelessness of the miners themselves. The death rate from falls of roof and coal alone in Pennsylvania is ten and four times what it is in France and Great Britain, as shown by the following statistics giving the death rate from falls of roof and coal per 1,000 persons employed underground in different states and countries during five years ending with the year 1900: France, .58; Great Britain, .78; Prussia, 1.22; Illinois, 1.34; Pennsylvania (bituminous), 1.84; Pennsylvania (anthracite), 2.11. Many of these deaths are due to carelessness upon the part of the miner; hence, instead of lowering the standard of oversight, it should be increased. The difference between a trained and untrained man is that while both may be able to perform regular routine work equally well, when an emergency arises the more training and education knows the reason for the difficulties and therefore cope with them better than the man who depends entirely upon previous experience and his own ingenuity. Few positions call for more tact, judgment and knowledge than that of mine foreman, as he has entrusted in his care the lives of many of his fellow-men. With thoroughly skilled and competent miners it is possible to operate a mine successfully with a foreman who is merely a 'gang boss,' but the necessity for trained and educated foremen increases as the grade of the miner decreases. The United States government recognizes the necessity of educational requirements, and its civil service regulations each year are being extended and more. If such regulations are advisable in those who do merely clerical work, how much more are they not desirable and absolutely necessary in those who have the lives of hundreds and thousands of their fellow-men in their charge?"

f roof in Ohio, as has been the experience in other states and till heads the list in the number of fatal accidents, and the which they are attributable. Forty-nine fatal accidents were due of during the year; those of a serious nature attributed to this ber 123; and those of minor importance 51. Eleven more its were attributable to this source during 1902 than 1901. The r of accidents due to falls of roof was 223, a gain of 31. This resents 60½ per cent. of the number of fatal accidents, 41 1-3 the serious and 33 1-3 per cent. of the minor.

ars are responsible for 10 fatal, 83 serious and 55 minor acci- anks second in the causes to which they are attributable. The r attributed to this source was 148.

atal accidents resulted from the careless handling of explosives mature explosions and from shots blowing through the rib. ulted seriously and six were of minor consequence. Explosions ed in the death of three persons, and seriously injured three.

stalling of electric wires in mines is an added danger with ill have to contend, and one which will require vigilance on the e owners to see to it that the wires are properly protected so will not come in contact with them in the performance of their ree fatal accidents were reported from this source during the first occurred at the LaBelle Shaft Mine, located in Jefferson o, and owned by the LaBelle Iron Co., Brilliant, Ohio, in ge Looman lost his life caused by the guy ropes coming in con- e electric wires and burning the ropes, and letting the bucket nce of one hundred and sixty feet. Three persons were in the o were seriously injured, while one resulted fatally. On June 1 Barkhurst was killed at the Dillon No. 2 Mine, located in Jef- y, and operated by the W. & L. E. Coal Co., Dillonvale, Ohio, n contact with the electric current, he being the trip rider on motor. Death resulted instantaneously. On December 13th, 1 Jenkins, employed at the Tom Corwin No. 1 mine, Jackson o, and operated by the Tom Corwin Coal Co., Dayton, Ohio, y coming in contact with the electric wires of the mine. He ed as a track layer, and was working on the second east entry 1 side of the mine, and after the day's work started towards . A pool of water had accumulated 3 inches deep in this en- kins was evidently walking on the track to avoid the water, manner slipped, throwing his right arm up to protect himself, positive electric wire which was suspended on the posts, death from the shock received.

re different character of these three accidents resulting from ectricity in the mines of the State, it behooves us to take every ecessary to protect the lives of the miners from this source.

Mining machines are responsible for nine serious, and four minor accidents, no fatal occurring from this cause during the year. The use of motors resulted in the death of two persons, three received serious injuries and one minor.

The number of accidents classified as Miscellaneous, number 2 fatal, 16 serious and 11 minor. The number of tons of coal mined to each life lost was 293,818, or one life lost to every 482 persons employed. The total number of accidents shows one person injured for every 70 1-3 persons employed.

HOWING THE NUMBER AND CHARACTER OF THE ACCIDENTS
RING DURING THE YEAR, AND TO WHAT SOURCES THEY
: ATTRIBUTABLE.

Causes.	Fatal.	Serious.	Minor.	Totals.	Percentage.
of.....	49	123	51	223	41.9
al.....	5	39	17	61	11.4
.....	10	83	55	148	27.2
explosion.....	5	13	4	22	4.1
of gas.....	3	3	.....	6	1.1
contact with electrical wires.....	3	.....	.....	3	.5
horses .....	.....	6	7	13	2.4
nber.....	.....	2	1	3	.5
.....	2	3	1	6	1.1
ng through rib.....	2	1	2	5	.9
achines .....	.....	9	4	13	2.4
ous	2	16	11	29	5.5
.....	81	298	153	532	

TABLE SHOWING THE NUMBER AND CHARACTER OF ACCIDENTS
WHICH RESULTED FROM THE PRINCIPAL SOURCES AS REPORTED
FROM EACH COUNTY.

Counties.	Fall of Roof.			Fall of Coal.			Injured by Mine Cars.			Prematur Ex-plosion.			Ex-plosion Fire Damp.			Miscel-laneous.			Total.
	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	
Athens	5	13	7	1	8	3	...	27	8	...	1	...	2	...	...	1	4	...	29
Belmont	3	14	7	...	2	...	2	8	5	...	3	...	...	...	...	1	3	...	50
Carroll	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	4
Columbiana ..	4	4	2	...	1	...	...	12	2	...	3	...	...	...	...	1	...	...	19
Coshocton .....	...	2	...	...	1	...	...	2	1	...	...	...	...	...	...	1	...	...	7
Gallia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guernsey	2	16	6	3	4	2	3	5	12	2	...	...	1	...	...	4	3	...	63
Harrison	3	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	6
Holmes .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hocking	3	6	1	...	2	1	2	3	3	...	...	...	3	...	...	7	4	...	35
Jackson	4	17	1	...	1	...	1	7	6	1	3	1	...	...	...	1	...	...	48
Jefferson	4	14	7	...	1	...	1	3	6	...	1	...	...	...	...	4	4	...	49
Lawrence	2	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	6
Mahoning ...	1	1	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	5
Medina .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Meigs .....	...	1	2	...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	1
Morgan .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monroe .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muskingum ..	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	4
Noble	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Perry	8	11	4	1	7	2	1	6	1	...	...	1	...	...	...	2	2	...	46
Portage .....	...	2	2	...	1	1	...	1	1	...	...	...	...	...	...	1	1	...	10
Scioto .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stark	5	13	7	...	7	4	...	3	7	1	...	1	...	...	...	3	4	...	55
Summit .....	...	2	1	...	...	...	...	1	1	1	...	...	...	...	...	1	...	...	7
Trumbull .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuscarawas ..	...	4	1	...	1	1	...	9	1	...	...	...	...	...	...	6	...	...	20
Vinton .....	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	2
Washington ..	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Wayne	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Totals ...	49	123	51	5	39	17	10	83	55	5	13	4	3	3	...	9	37	26	532

NUMBER 10, 1887, TO NOVEMBER 15, 1902.

Years.	Falls of roof.	Falls of coal.	Injured by mine cars.	Premature explosion.	Explosion of gas.	Falls down shafts.	Crushed under cage.	Falls from tippie.	Kicked by mule or horse.	Injured by railway cars.	Falls of timber.	No cause given.	Shot blowing through rib.	Injured by miners' pick.	Heart failure.	Electric wires.	Injured by mining machines.	Electric motors.	Miscellaneous.	Totals.
1888	100	47	46	13	4	...	8	3	2	...	...	5	1	...	...	...	...	...	9	238
1889	92	50	48	12	4	1	2	...	4	2	...	3	...	1	...	...	...	...	11	230
1890	109	44	59	13	4	2	1	...	2	...	...	3	...	1	...	...	...	...	7	245
1891	112	26	47	24	6	...	3	...	5	...	4	...	...	...	1	...	...	...	14	242
1892	126	41	73	21	3	...	1	2	4	...	...	...	...	...	...	...	...	...	11	291
1893	118	55	88	17	2	2	1	4	6	...	5	...	...	...	...	...	...	...	14	327
1894	98	39	60	17	5	5	4	1	1	2	3	...	...	...	4	...	...	...	15	257
1895	108	46	67	23	1	1	4	...	4	2	...	...	...	...	...	...	...	...	8	271
1896	133	34	74	20	7	1	2	...	9	2	...	...	...	...	2	...	...	...	10	303
1897	98	48	70	16	5	2	1	1	6	2	...	...	...	...	...	1	...	...	12	277
1898	156	47	69	8	13	1	3	1	3	3	1	...	...	...	1	...	...	...	14	341
1899	153	52	100	20	10	3	6	2	6	5	3	...	...	...	2	...	...	...	13	390
1900	172	62	104	24	6	4	4	1	6	5	4	...	...	...	...	...	...	...	19	424
1901	191	62	147	14	6	2	7	1	12	...	6	...	...	...	...	...	...	...	50	514
1902	223	61	148	22	6	...	...	...	13	...	3	...	...	...	...	...	...	6	29	532
Total	1,989	714	1,200	264	82	29	46	18	83	31	35	11	34	17	14	7	66	6	236	4,882

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE LOST, TO THE SERIOUS INJURY AND TO THE TOTAL NUMBER OF FATAL AND SERIOUS ACCIDENTS FOR EACH YEAR SINCE THE CREATION OF THE DEPARTMENT.

Years.	Number of Fatal Accidents.	Number of Serious Accidents.	Number of Tons Mined to the Person Killed or Seriously Injured and Number of Tons to the Total.			Name of Chief M Inspector.
			Fatal.	Serious.	Total.	
1874.....	20	80	108,919	4,844	31,419	Andrew Roy.
1875.....	23	40	202,667	121,606	77,210	"
1876.....	13	70	269,999	50,000	42,168	"
1877.....	30	39	175,000	134,615	76,087	"
1878.....	20					Jas. D. Poston.
1879.....						David Owen.
1880.....	22	61	292,624	114,754	84,217	Andrew Roy.
1881.....	29		283,621			"
1882.....	25		378,000			"
1883.....	26		316,516			"
1884.....	26	40	226,636	143,433	86,932	Thos. B. Bancroft.
1885.....	51	32	244,258	153,258	94,170	"
1886.....	43	65	194,308	194,772	78,104	"
1887.....	36	75	286,158	137,356	92,808	"
1888.....	29	79	376,239	138,113	100,934	Robt. M. Haseltine.
1889.....	33	52	330,527	209,757	128,322	"
1890.....	42	52	280,687	226,708	125,413	"
1891.....	44	66	296,595	197,730	118,636	"
1892.....	42	93	347,929	157,129	108,170	"
1893.....	32	123	463,378	120,553	95,665	"
1894.....	45	116	364,672	102,674	73,976	"
1895.....	52	152	263,151	90,025	67,078	"
1896.....	41	159	314,942	81,211	64,563	"
1897.....	40	142	311,221	87,668	68,400	"
1898.....	52	155	270,463	90,736	67,913	"
1899.....	59	204	269,643	77,985	60,490	"
1900.....	68	207	285,686	93,848	70,643	Elmer G. Biddison.
1901.....	72	276	282,240	73,627	58,394	"
1902.....	81	298	293,818	80,299	63,138	"

AND COUNTIES SINCE 1860 AS COMPARED WITH 1910.

	1886.				1887.				1888.			
	Number of tons mined for each accident.		Number of miners for each life lost.		Number of tons mined for each accident.		Number of miners for each life lost.		Number of tons mined for each accident.		Number of miners for each life lost.	
	Fatal.	Non-fatal.			Fatal.	Non-fatal.			Fatal.	Non-fatal.		
Colorado	165,287	66,126	545	149,311	34,456	75,361	27,319	602	191,369	80,046	535	
Great Britain	214,909	333,333	497	162,334	69,017	280,512	157,049	458	196,311	49,832	631	
Illinois	428,571	350,306		227,323	56,830	177,401	45,874	210	154,826	105,674	2,325	
Indiana	183,494	61,111		224,297	163,019	150,383	59,204	765	376,239	138,113	361	
Iowa	235,714	21,709	206	256,172		888,064	56,849		166,632			
Kansas												
Kentucky												
Maryland												
Missouri	50,654											
Montana												
Nova Scotia												
Ohio	194,309	129,772	474	238,691	167,083	376,239	138,113					
Pennsylvania	176,311	53,672	440	286,158	137,356	166,632	56,849					
Tennessee				169,327	151,900							
Utah												
Washington												
West Virginia												
									191,984	63,152	346	

BLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1889.		Number of miners for each life lost.	1890.		Number of miners for each life lost.	1891.		Number of miners for each life lost.
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Colorado	178,227	.....	530	104,375	31,385	239	121,126	27,230	227
Great Britain	333,745	69,738	716	286,316	51,955	539	261,012	42,672	549
Illinois .....	.....	.....	.....	1,239,429	578,400	936	.....	.....	.....
Indiana	98,600	52,772	321	331,709	132,683	824	206,776	88,618	507
Iowa .....	.....	.....	.....	314,506	125,802	955	250,339	78,678	813
Kansas	156,136	56,792	378	233,089	101,343	406	184,383	.....	542
Kentucky .....	.....	.....	.....	.....	.....	.....	380,084	285,063	437
Maryland	222,347	111,173	514	243,739	87,049	765	147,223	82,813	413
Missouri .....	.....	.....	1,818	.....	.....	.....	.....	.....	.....
Montana	219,539	97,571	646	220,444	94,479	591	681,594	638,996	1,915
Nova Scotia	330,527	209,757	615	280,687	226,708	456	296,595	65,910	545
Ohio	150,202	56,789	144	154,257	58,235	181	131,980	64,814	287
Pennsylvania .....	.....	.....	.....	.....	.....	.....	109,295	43,718	253
Tennessee .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia .....	.....	206,358	.....	206,358	54,450	327	202,262	104,020	363

INSPECTOR OF MINES.

[illegible]

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1895.		Number of miners for each life lost.	1896.		Number of miners for each life lost.	1897.		Number of miners for each life lost.
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	150,150	.....	217	205,201	.....	353	151,122	.....	326
Colorado	145,195	.....	320	49,582	57,146	99	.....	.....	715
Great Britain .....	.....	.....	.....	190,596	.....	696	207,739	.....	490
Illinois	236,478	29,312	515	256,969	29,444	429	290,910	38,751	.....
Indiana	187,438	81,360	343	145,290	61,638	.....	264,225	176,170	.....
Iowa	159,792	76,091	550	153,282	75,010	498	172,715	70,365	.....
Kansas	319,084	75,972	936	285,979	127,669	734	549,468	109,893	531
Kentucky	400,971	178,209	983	530,580	167,551	1,258	275,338	122,372	1,450
Maryland	386,611	267,653	.....	.....	.....	1,268	.....	.....	645
Missouri	175,621	152,205	557	151,272	121,007	412	303,674	105,625	1,639
Nova Scotia .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	263,151	90,025	431	314,942	81,211	694	311,221	87,668	720
Pennsylvania	178,600	68,715	397	144,205	84,419	342	177,350	91,836	424
South Dakota .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	62,695	.....	.....	121,077	50,259	.....	237,211	.....	.....
Utah .....	.....	.....	.....	125,811	55,916	.....	194,031	32,338	.....
Washington	33,249	48,489	.....	150,316	40,084	.....	190,027	31,671	.....
West Virginia	118,965	.....	234	205,692	101,287	372	208,040	77,607	346

AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1898.		Number of miners for each life lost.	1899.		Number of miners for each life lost.	1900.		Number of miners for each life lost.	1901.		Number of miners for each life lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	143,705	.....	220	187,119	213,851	323	223,603	461,538	386	218,186	.....	345
Colorado .....	.....	.....	.....	.....	.....	.....	189,508	87,234	.....	108,698	.....	145
Great Britain	224,991	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois	247,991	42,464	467	278,982	39,254	440	267,595	41,168	419	263,713	.....	311
Indiana .....	.....	.....	.....	390,998	43,444	424	349,059	35,301	549	.....	.....	.....
Iowa .....	.....	.....	.....	247,470	190,365	401	98,943	57,892	194	165,232	102,704	179
Kansas .....	.....	.....	.....	256,056	91,042	637	.....	.....	.....	267,806	.....	439
Kentucky	590,355	.....	1,401	643,634	75,313	1,379	295,334	54,572	601	.....	.....	.....
Maryland	1,031,611	133,111	1,143	.....	.....	.....	437,863	.....	663	426,074	.....	448
Missouri	315,350	105,117	821	227,986	138,752	.....	299,502	130,175	764	253,333	.....	615
Nova Scotia .....	.....	.....	.....	146,796	165,146	.....	.....	.....	.....	.....	.....	.....
Ohio	270,403	90,736	545	269,643	77,985	475	285,692	54,569	466	282,249	45,976	465
Pennsylvania	332,852	140,278	.....	283,167	184,451	430	299,300	135,786	421	268,813	123,345	391
Tennessee	162,499	71,738	411	207,563	50,454	427	.....	.....	.....	71,438	47,321	.....
Utah	224,432	48,093	.....	.....	23,733	.....	5,904	19,587	8	153,607	115,205	198
Washington	197,251	23,670	187	42,613	29,965	73	73,243	31,000	128	92,748	30,171	178
West Virginia	184,026	132,316	237	182,529	84,197	221	133,949	107,312	154	154,738	111,755	249

TABLE SHOWING FATAL ACCIDENTS DURING THE YEAR.

Date.	Name.	Nationality.	Age.	Cause of Fatality.	Name of Mine.	County.
1901.						
December 13.....	Daniel Jenkins.....	American	23	Killed by coming in contact with an electric wire.....	Tom Corwin No. 1.	Jackson.
December 17.....	Wm. Newhouse.....	American	25	Injured internally by a fall of draw-slate.....	Magnolia	Carroll.
December 17.....	Robert McMillen.....	English	62	Killed by a shot blowing through the rib.....	Cherry Valley	Columbiana.
December 22.....	Thos. Lemmons.....	American	63	Caught between mine car and rib; died Jan. 8, 1902.	Glen Run No. 2	Jefferson.
December 25.....	Geo. Livingston.....	Scotch	67	Killed by a fall of coal.....	Upson No. 1.....	Perry.
December 27.....	Andrew Johnson.....	American	37	Injured by a fall of slate; died December 28.	New Pitts. No. 6	Hocking.
January 4.....	Jacob Shuster.....	American	17	Killed by a fall of slate.....	Long Run	Perry.
January 7.....	Andro Drankoski.....	Polish	35	Killed by being struck by a motor.....	Elm Run No. 4	Jefferson.
January 11.....	Detesto Parlo.....	Austrian	46	Killed by a fall of stone.....	Edwards No. 2	Stark.
January 20.....	Fred Kromskopf.....	German	30	Killed by a fall of slate.....	Kings	Muskingum.
January 21.....	Pearl Ryan.....	American	24	Killed by a fall of slate.....	Lawrence Mill	Perry.
January 25.....	Joseph Jackson.....	American	29	Killed by a fall of slate.....	Long Run	Guernsey.
January 26.....	Patrick Keaton.....	Irish	23	Killed by a fall of slate.....	Victor	Lawrence.
January 27.....	John Purchas.....	American	23	Killed by being run over by a motor.....	Long Run	Jefferson.
January 30.....	John Griffith.....	American	20	Killed by a fall of slate.....	Eureka	Jackson.
February 7.....	August Wasey.....	German	21	Killed by a fall of stone.....	No. 21	Stark.
February 7.....	Thomas Sweeney.....	Irish	51	Killed by being run over by mine cars.....	No. 21	Perry.
February 8.....	Wm. Klok.....	American	24	Inj. by being crumpled between mine cars; died Feb. 9.	Old Orchard	Guernsey.
February 12.....	Wm. R. Campbell.....	English	18	Killed by a fall of coal.....	Walbunding	Guernsey.
February 13.....	Henry Forehead.....	Welsh	45	Killed by an explosion of powder.....	Swinelhart Clay	Summit.
February 17.....	Jas. W. Crawford.....	American	41	Inj. by a fall of slate; died March 12.	Crooks No. 2	Columbiana.
February 24.....	Geo. D. Looman.....	American	40	Coming in contact with electric wires, burning guy ropes and letting bucket down shaft.	Labelle	Jefferson.
March 3.....	David Lytle.....	American	33	Killed by a fall of slate.....	Chan Patterson	Jackson.
March 6.....	John Earls.....	American	62	Killed by a fall of slate.....	New Shaft	Columbiana.
March 20.....	Preston Dine.....	American	24	Killed by a fall of clay.....	Clinton Sparta	Stark.
March 21.....	Wm. Drinkwater.....	American	18	Killed by a fall of rock.....	Lost Run	Hocking.
March 23.....	A. W. Starner.....	American	30	Killed by a fall of rock.....	Bristol No. 1	Perry.
March 27.....	George Harton.....	American	19	Killed by a fall of slate.....	Fairview No. 3	Maioning.
April 8.....	Cash Jones.....	American	21	Inj. by coming in contact with mine cars; died May 14.	Jobs No. 3	Hocking.
April 8.....	Jacob Woods.....	American	38	Inj. by a fall of slate; died April 9.	West Lebanon	Wayne.
April 10.....	Jos. Hallico.....	Slov	16	Killed by a fall of roof.....	New Pitts. No. 1	Hocking.
April 10.....	Samuel Armando.....	Hungarian	28	Killed by a fall of slate.....	Empire No. 1	Hocking.
April 10.....	Wm. Thomas.....	American	50	Inj. by a fall of slate; died May 16.	Empire No. 1	Belmont.
April 16.....	Wm. Thomas.....	American	50	Inj. by a fall of slate; died April 17.	Empire No. 1	Stark.
April 19.....	Julius Kreger.....	German	34	Killed in passing a room where a shot was fired out of turn	Huff & Run	Carroll.
May 4.....	Wm. H. Feather.....	German	34	Killed in passing a room where a shot was fired out of turn	Pigeon Run	Stark.

June 27	David Corozola	Hungarian	21	Killed by a fall of slate.	Crescent No. 3.	Belmont.
July 2	Wm. B. Linden-decker	American	17	Killed by being run over by mine cars.	Glen	Belmont.
July 3	George Kidwell	American	51	Killed by a fall of slate.	Kimberly	Athens.
July 3	Patrick Russell	American	46	Killed by a fall of slate.	Wheeling Creek	Athens.
July 8	Jos. Plicher	Polish	19	Killed by a fall of soapstone.	No. 1	Belmont.
July 21	David Nash	American	13	Killed by a boiler explosion	Cornella	Vinton.
August 4	Frank Koran	Hungarian	20	Killed by a fall of stone	Glen Run No. 1	Jefferson.
August 6	Valentine Wolf	German	57	Killed by a fall of slate.	Massillon No. 1	Stark.
August 8	Wm. Raber	German	55	Killed by a fall of draw-slate	No. 9	Perry.
August 13	George Lesko	Slav	23	Burned by an explosion of powder; died August 19	Old Orchard	Guernsey.
August 13	Geo. Vandrosik	Slav	31	Burned by an explosion of powder; died August 14	Old Orchard	Guernsey.
August 14	Frank Geres	German	31	Killed by a shot blowing through the rib.	Wheeling Creek	Guernsey.
September 4	Mike Missak	Slav	26	Killed by a fall of slate.	No. 2	Belmont.
September 9	A. W. Duakey	American	20	Killed by falling in front of a loaded mine car.	Roby	Harrison.
September 12	C. M. Bundy	American	16	Killed by being caught between mine car and post.	New Pitts. No. 1	Hocking.
September 15	Elzie Shannon	American	28	Killed by a fall of slate.	Walhounding	Guernsey.
September 17	Andrew Galten	Scotch	45	Killed by a fall of roof.	Halbert	Athens.
September 17	Robert Jones	Scotch	25	Killed by a fall of roof.	XX	Perry.
September 18	Amos Justice	American	25	Killed by a fall of slate.	XX	Perry.
September 25	Henry Levering	American	46	Killed by a fall of slate.	Halley	Lawrence.
October 10	Stan Nihlewicz	Polish	52	Leg injured by rope breaking; died October 24	Pekin	Athens.
October 13	Joe Schriener	German	32	Killed by a fall of soapstone.	Dillon No. 2	Jefferson.
October 16	Chas. Davidson	American	17	Killed by a fall of slate.	Sedalla	Athens.
October 23	D. W. Williams	Welsh	34	Killed by a fall of coal.	Diamond No. 4	Guernsey.
October 28	George Burtoft	English	44	Killed by a fall of rock	Walhounding	Guernsey.
October 28	Thos. Summerville	Scotch	54	Killed by a fall of slate.	Kings	Guernsey.
November 2	Chas. Sampson	American	19	Killed by an explosion of gas	Kelley	Columblana.
November 2	Morris O'Brien	American	42	Killed by an explosion of gas	Lost Run	Hocking.
November 3	M. H. Kennard	American	25	Killed by being run over by loaded mine car	Lost Run	Hocking.
November 3	Frank Minard	English	17	Killed by being run over by loaded mine car	Superior No. 3	Hocking.
November 5	Ed. Bolan	American	27	Back and head injured by a fall of slate; died Nov. 7	Ideal	Jackson.
November 11	Chas. Clark	American	26	Injured by a fall of slate; died December 11	Orr	Guernsey
November 12	Lewis Hodderish	Hungarian	32	Killed by a fall of slate.	Roby No. 1	Noble.
November 12	Albert Sulfnaki	Polish	35	Killed by a fall of rock	Tlupcanoe	Harrison.
November 14	Vest Halterman	American	50	Killed by a premature explosion	Fluhart No. 2	Jackson.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.							
November 16.....	John Wilhelm.....	.....	.....	Hips and breast injured.....	Fall of slate.....	New Pittsburg.....	Hocking.
November 19.....	Albino Stantina.....	.....	.....	Face and hands burned.....	Explosion of powder.....	Wheeler Creek No. 1.....	Belmont.
November 19.....	Thomas Owens.....	.....	.....	Leg injured.....	Fall of coal.....	Woodland.....	Stark.
November 20.....	Oley Larrison.....	.....	.....	Leg broken.....	Fall of slate.....	Chestnut Ridge No. 2.....	Perry.
November 21.....	James Anderson.....	.....	.....	Ankle injured.....	Riding on mine cars which jumped the track.....	Rock Cut.....	Tuscarawas.
November 25.....	Thomas Clark.....	.....	.....	Head and breast injured.....	Injured by an explosion of powder.....	Leetonia.....	Columbiana.
November 25.....	Frank Savage.....	.....	.....	Leg broken.....	Fall of rock.....	Elm Run No. 1.....	Stark.
November 29.....	Harry Knox.....	.....	.....	Foot injured.....	Caught between car bumpers.....	Superior No. 3.....	Jackson.
November 29.....	Thomas Smith.....	.....	.....	Foot injured.....	Caught by mine car.....	Wheeler Creek No. 2.....	Belmont.
December 3.....	Peter Riley.....	.....	.....	Hips injured.....	Run over by mine car.....	Deanville No. 1.....	Athens.
December 5.....	George Sterling.....	.....	.....	Hips injured.....	Caught between wagon and rib.....	Gaylord.....	Belmont.
December 6.....	Charles Street.....	.....	.....	Leg injured.....	Mine cars.....	Glen.....	Belmont.
December 6.....	P. R. Wallace.....	.....	.....	Jawbone broken.....	Fall of slate.....	Beebe.....	Washington.
December 10.....	Roy Patterson.....	.....	.....	Slide injured.....	Caught between mine car and horse.....	Black Diamond.....	Athens.
December 11.....	John McGlory.....	.....	.....	Leg broken.....	Fall of draw slate.....	Chestnut Ridge No. 2.....	Perry.
December 12.....	Lafe Frazee.....	.....	.....	Finger cut off.....	Caught in mining machine jack.....	New Pittsburg No. 7.....	Hocking.
December 12.....	Elza Gleason.....	.....	.....	Face and back of head injured.....	Fall of slate.....	Milton No. 2.....	Jackson.
December 13.....	Jerome Martin.....	.....	.....	Ribs broken.....	Fall of slate.....	Milton No. 2.....	Jackson.
December 16.....	W. D. Jenkins.....	.....	.....	Finger mashed.....	Mine cars.....	Hutson No. 5.....	Portage.
December 17.....	Peter Woolf.....	.....	.....	Ankle injured.....	Caught between two lumps of coal.....	Woodland.....	Stark.
December 18.....	Earned Ketter.....	.....	.....	Seriously injured.....	Fall of slate.....	Fluhart No. 3.....	Jackson.
December 18.....	Pat McLaughlin.....	.....	.....	Back injured.....	Fall of slate.....	Wellston No. 3.....	Jackson.
December 18.....	Joe DePaul.....	.....	.....	Face and head cut.....	Fall of soapstone.....	Dillon No. 2.....	Jefferson.
December 19.....	Pearl Hood.....	.....	.....	Collar bone broken.....	Fall of timber.....	East Run No. 4.....	Hocking.
December 22.....	Wm. Degarmo.....	.....	.....	Ribs broken.....	Fall of stone.....	Leetonia.....	Jefferson.
December 23.....	Pasco Smith.....	.....	.....	Three ribs broken.....	Struck by mine car.....	Canal.....	Jefferson.

DATE	NAME	AGE	SEX	CAUSE OF ACCIDENT	DESCRIPTION OF ACCIDENT	LOCATION	DATE	NAME
December 31	August Baldy			collar bone broken	Caught between mine car and rib.	Fluhart No. 2	Jackson.	
1902.				Ribs broken	Fall of coal.	No. 18	Perry.	
January 1	Gustave Wagenhafer			Hand and arm injured	Mining machine	Brilliant	Jefferson.	
January 3	Henry Jackson	35		Arm broken	Falling from top of fan house.	West Pittsburgh	Jefferson.	
January 4	Joseph Betts	45		Leg broken	Fall of slate	Milton No. 4	Jefferson.	
January 4	Frank Goclays	25		Leg injured	Fall of roof	Crescent No. 2	Belmont.	
January 7	Henry Hesser	39		Ankle fractured	Fall of slate	Midvale No. 2	Tuscarawas.	
January 7	George Phillips	15		Leg broken	Run over by mine cars	Rock Run No. 3	Perry.	
January 7	Thos. McAlear	27		Foot crushed	Fall of coal	New Crescent	Perry.	
January 7	Frank Sagle	24		Hand injured	Fall of rock			
January 8	William Nolan	26		Hip and back injured	Fall of stone	Glen	Belmont.	
January 8	James Haught	50		Foot crushed	Fall of coal	Carolina	Belmont.	
January 8	Seth Tinkam	38		Leg injured	Run over by mine car	No. 24	Athens.	
January 15	George Allen	22		Leg injured	Run over by mine car	Zanesville No. 3	Perry.	
January 16	Andy Dagon	54		Leg broken	Fall of coal	Hudson No. 6	Portage.	
January 16	James Fitch	53		Seriously injured	Fall of stone	Hudson	Coshocton.	
January 16	M. E. Bailey	38		Back sprained	Caught between water tank and roof	Indian Run	Stark.	
January 17	Joe Gales	55		Ankle sprained	Fall of slate	Globe No. 3	Jackson.	
January 19	Fred Kempton	19		Leg injured	Caught between mine cars	Renda No. 4	Athens.	
January 24	D. Workman	55		Three ribs broken	Fall of coal	Silver Run	Melara.	
January 25	John Shea	19		Arm broken	Caught by mine car	Luhrig No. 2	Athens.	
January 27	Wm. Robinson			Collar bone and three ribs broken	Caught between mine cars and rib.	Jobs No. 17	Athens.	
February 3	John Lanattl	26		Leg broken	Fall of slate	Empire No. 1	Belmont.	
February 4	Wm. Roberts	17		Foot mashed	Fall of coal	No. 16	Athens.	
February 4	Wm. Oliver	20		Arm broken	Mine car	No. 6	Athens.	
February 5	Wm. Blitts	24		Side and back injured	Fall of slate	New Shaft	Columbiana.	
February 6	Mike Strocker	35		Foot injured	Mining machine	Ideal	Guernsey.	
February 7	Elix Raffel	40		Jured	Fall of stone	Black Diamond	Belmont.	
February 10	M. L. Sherman	42		Thumb broken and finger mashed	Fall of slate	Luhrig No. 1	Athens.	
February 10	Leo Gossman	20		Knee injured	Fall of coal	Rose	Morgan.	
February 11	Nick Smith	40		Foot injured	Caught between mine cars	Turkey Foot	Summit.	
February 11	Frank Hawkins	35		Foot mashed	Fall of rock	Imperial	Guernsey.	
February 12	James Polaskie	20		Skull fractured	Premature explosion	Cherry Valley	Columbiana.	
February 12	Chas. Kettler	32		Back injured	Fall of slate	Singer or No. 1	Stark.	
February 12	Thomas Harris	20		Leg badly squeezed	Caught between loaded mine cars.	Wade	Coshocton.	

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1902.							
February 12.....	Flemming Tabler..	Afro-Amer.	22	Head cut and shoulder dislocated.....	Fall of coal.....	Big Run.....	Athens.
February 15.....	John Garrigan.....	Irish.....	62	Shoulder broken.....	Fall of coal.....	Rock Run No. 3.....	Perry.
February 17.....	Noon Dexter.....	American.....	32	Finger injured.....	Coupling mine cars.....	Ingham.....	Vinton.
February 17.....	Jos. Jennings.....	American.....	40	Back injured.....	Fall of rock.....	Hudson.....	Coshocton.
February 19.....	B. A. Ervin.....	American.....	24	Face and hands burned.....	Explosion of powder.....	Luhrig No. 1.....	Athens.
February 22.....	Ebenezer Bailey.....	American.....	55	Ankle fractured.....	Fall of slate.....	Forsythe.....	Guernsey.
February 25.....	Ambrose Harrington.....	American.....	17	Leg injured.....	Caught between loaded mine cars.....	Phoenix No. 2.....	Athens.
February 26.....	Tom Fox.....	American.....	34	Shoulder broken.....	Premature explosion.....	Alma.....	Jackson.
February 26.....	John Kimble.....	American.....	35	One rib broken.....	Fall of draw slate.....	Alma.....	Jackson.
March 2.....	Joe Sewell.....	English.....	50	Face burned.....	Explosion of gas.....	Imperial.....	Guernsey.
March 2.....	Ross B. Kidd.....	American.....	32	Foot injured.....	Fall of coal.....	Boggs No. 2.....	Belmont.
March 3.....	Charles Kelley.....	American.....	24	Mouth, eyes and ankle injured.....	Fall of draw slate.....	No. 12.....	Perry.
March 4.....	Mike Tarhovitsky.....	Slav.....	20	Foot injured.....	Fall of coal.....	Cisco.....	Guernsey.
March 5.....	James Tarmo.....	Italian.....	35	Three ribs broken.....	Squeezed by a trip.....	Boggs No. 2.....	Belmont.
March 5.....	Gustave Jacobowski.....	Polish.....	24	Back sprained and leg broken.....	Fall of slate.....	Dillon.....	Jefferson.
March 7.....	Peter Karrenbauer.....	American.....	21	Breast and shoulder injured.....	Fall of coal.....	No. 6.....	Stark.
March 7.....	Frank House.....	American.....	45	Both legs broken.....	Fall of slate.....	Ideal.....	Guernsey.
March 7.....	Andy Washko.....	Slav.....	27	Collar bone broken.....	Fall of slate.....	Cisco.....	Guernsey.
March 8.....	John Lamson.....	Slav.....	63	Leg injured.....	Fall of slate.....	New shaft.....	Columbiana.
March 10.....	Mike Horcasvia.....	Slav.....	30	Leg injured.....	Fall of coal.....	Trail Run.....	Guernsey.
March 13.....	John Tutor.....	American.....	45	Leg cut off.....	Riding on front end of mine car.....	Henda No. 6.....	Athens.
March 13.....	Jackson Huggins.....	American.....	20	Seriously injured.....	Fall of slate.....	Fluhart No. 1.....	Jackson.
March 14.....	Jas. Harnelton.....	American.....	65	Finger cut off and back injured.....	Fall of slate.....	Cisco.....	Guernsey.
March 18.....	Jos. Womas.....	Hungarian.....	45	Leg broken.....	Fall of slate.....	McLish.....	Athens.
March 20.....	Elza Harlberger.....	American.....	28	Seriously injured.....	Caught between water box and roof.....	Carbondale No. 3.....	Athens.
March 25.....	John Polack.....	Slav.....	32	Leg broken.....	Fall of slate.....	Crescent No. 2.....	Belmont.
March 26.....	Victor Pope.....	Hungarian.....	18	Leg broken.....	Fall of stone.....	Maple Hill.....	Belmont.
March 26.....	Wm. Pope.....	American.....	32	Ankle broken.....	Falling under a mine car.....	Standard.....	Jackson.
March 27.....	John Hagstie.....	American.....	32	Leg broken.....	Fall of draw slate.....	Brilliant.....	Jefferson.
March 28.....	John Hagstie.....	American.....	32	Leg broken.....	Fall of draw slate.....	Brilliant.....	Jefferson.

April 2	Jas. McCulley	American	45	Fractured	Fail of slate	Louko	Perry.
April 2	M. D. Huffman	American	30	Head injured	Fail of soapstone	McFayden	Jefferson.
April 3	George Higgins	American	31	Thumb mashed	Shot blowing through the rib	Black Diamond	Belmont.
April 5	John L. Lapp	American	62	Seriously injured	Kicked by a mule	Cawthorn	Hocking.
April 5	Earnest Cookson	American	22	Arm and collar bone broken	Fail of stone	Lost Run	Hocking.
April 5	Thomas Anderson	American	30	Leg broken	Mine car jumping the track	Kelley	Jefferson.
April 5	John Walsh	Irish	30	Hip broken	Fail of slate	Kings	Guernsey.
April 7	John Williams	Welsh	49	Head injured	Fail of coal	Phoenix No. 2	Athens.
April 10	John Hallick	Slav	24	Foot mashed	Run over by mine car	Phoenix No. 2	Athens.
April 12	Frank Balus	English	52	Leg broken	Fail of roof	N. Pitts. No. 1	Hocking.
April 12	George Gohls	Afro-Amer.	25	Leg broken	Straggling mine car	Luhrig	Athens.
April 12	Wm. Pratt	American	40	Side bruised	Attempting to board a loaded mine car	No. 6	Athens.
April 15	James Mackey	American	35	Foot cut off	Fail of slate	Greenville	Stark.
April 15	Frank Tyson	American	32	Head mashed	Chain of mining machine	Ideal	Guernsey.
April 16	Henry Ichel	German	41	Hand badly injured	Fail of coal	Phoenix No. 2	Athens.
April 16	Chas. Gabriel	American	24	Foot injured	Mine cars	Wainwright No. 4	Tuscarawas.
April 16	Wm. Holland	American	23	Leg and back injured	Run over by mine cars	Luhrig No. 1	Athens.
April 17	D. D. Williams	American	30	Jured	Fail of slate	Shafer	Athens.
April 17	Dennis Call	American	48	Arm cut off	Run over by motor	No. 6	Athens.
April 17	Henry Morris	American	36	Rib broken	Fail of coal	No. 9	Perry.
April 18	Wm. West	American	21	Leg injured	Run over by mine car	Cawthorn	Hocking.
April 22	Pat Hurley	Irish	35	Hand injured	Caught in tall chain	Morgan Run	Conchocton.
April 25	Jerry Davis	American	60	Leg and collar bone broken	Fail of rock	N. Pitts. No. 7	Hocking.
April 25	Frank Stemmyer	German	23	Seriously injured	Fail of slate	Brilliant	Jefferson.
April 28	Charles Smith	American	35	End of thumb cut off	Caught in safety latch	Luhrig No. 2	Athens.
April 29	Henry Lunning	German	20	Finger cut off	Fail of draw slate	Keystone No. 3	Perry.
April 30	Reuben Welch	American	34	Back injured	Fail of coal	No. 18	Perry.
May 1	Edward Sullivan	American	26	Leg broken	Fail of shale	Tom Corwin No. 1	Jackson.
May 2	Charles Lamont	French	22	Shoulder dislocated	Kicked by a mule	Forsythe	Guernsey.
May 2	Frank Donnard	American	45	Hand cut and bruised	Premature explosion	Wheeling Creek	Belmont.
May 3	Charles Stewart	American	30	Back injured	Fail of rock	Superior No. 2	Jackson.
May 3	John Barstow	American	35	Seriously injured	Caught by mine cars	Little Kate	Guernsey.
May 5	Fred Eggers	German	28	Arm dislocated	Mine car	Bell Run	Athens.
May 5	Frank Heans	American	52	Three ribs broken	Falling across rail while pushing mine car	Ruckhorn	Tuscarawas.
May 5	Morgan Rees	Welsh	52	Leg cut off	Injured by mining machine picks	Thompson Run W.	Tuscarawas.
May 6	James Poloskev	Bohemian	45	Ankle injured and rib fractured	Fail of draw-slate	Deerfield	Portage.
May 8	Charles Larson	American	32	Two ribs broken	Fail of slate	Kings	Guernsey.
May 8				Neck cut and arm bruised	Fail of coal	Forsythe	Guernsey.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
May 9.....	John Simpson.....	American....	25	Shoulder broken and ankle injured.....	Fall of soapstone.....	Connor No. 1.....	Jefferson.
May 12.....	Freeman Dowler.....	American....	32	Ankle bruised.....	Derailed mine car.....	Kimberly No. 104.	Athens.
May 13.....	Andy Paragon.....	German.....	40	Foot broken.....	Fall of sandstone.....	Warwick.....	Summit.
May 13.....	John Taylor.....	American....	27	Leg broken.....	Mine cars.....	Kings.....	Guernsey.
May 13.....	Geo. Swindler, Jr.....	English.....	45	Ribs broken.....	Placing mine car on track.....	No. 4.....	Athens.
May 15.....	Thomas Helise.....	Welsh.....	45	Ribs broken.....	Fall of coal.....	Elm Run No. 3.....	Stark.
May 16.....	Wm. Christopher.....	American....	25	Leg injured.....	Caught between mine cars.....	Kings.....	Guernsey.
May 16.....	Daniel Plant.....	English.....	36	Arm and ribs injured.....	Mine cars.....	No. 18.....	Perry.
May 16.....	Harry Riley.....	American....	31	Leg broken.....	Run over by loaded mine car.....	Royal No. 1.....	Tuscarawas.
May 17.....	John Lauitz.....	German.....	23	Leg broken.....	Fall of stone.....	Eureka.....	Stark.
May 19.....	Jacob Wagoner.....	German.....	48	Shoulder dislocated.....	Fall of stone.....	Stark.....	Stark.
May 21.....	Wm. Atkinson.....	American....	33	Seriously burned.....	Explosion of powder.....	Cherry Valley.....	Columbiana.
May 22.....	Fred Rogers.....	American....	23	Arm injured.....	Fall of slate.....	Leatherwood No. 1.....	Guernsey.
May 23.....	J. C. Metree.....	American....	22	Hand injured.....	Caught by loaded mine car.....	No. 17.....	Athens.
May 23.....	Howard Murphy.....	American....	35	Back injured.....	Fall of roof.....	Jobs No. 23.....	Athens.
May 23.....	James Lonkes.....	American....	40	Face and head cut.....	Premature explosion.....	Emma No. 2.....	Jackson.
May 24.....	P. Nallach.....	German.....	54	Arm broken and hips crushed.....	Fall of slate.....	No. 7.....	Stark.
May 24.....	Wm. Lavenger.....	American....	24	Back injured and hip dislocated.....	Fall of slate.....	Milton No. 3.....	Jackson.
May 25.....	M. Thomas.....	Welsh.....	30	Ankle broken.....	Caught by mine car.....	Superior No. 3.....	Jackson.
May 25.....	John Butler.....	American....	30	Leg injured and ankle sprained.....	Fall of sand rock.....	Little Kate.....	Guernsey.
May 26.....	Alva C. Baillis.....	American....	15	Back injured.....	Fall of bone coal.....	Oakdale.....	Athens.
May 28.....	James Loon.....	English.....	78	Leg crushed.....	Run over by loaded mine cars.....	Huff's Run.....	Tuscarawas.
May 29.....	Clifford Davis.....	American....	18	Ankle injured.....	Premature explosion.....	National.....	Maioning.
May 31.....	Frank Patten.....	American....	15	Leg broken.....	Riding on truck and running against mining machine.....	Lost Run.....	Hocking.
May 31.....	Dora Petticoord.....	American....	40	Back and head bruised.....	Fall of stone.....	Tin Plate.....	Belmont.
June 2.....	Edward Pugh, Jr.....	English.....	52	Leg broken.....	Fall of slate.....	State Line No. 3.....	Columbiana.
June 3.....	Thomas Jones.....	Welsh.....	20	Foot mashed.....	.....	Imperial.....	Guernsey.
June 3.....	.....	American....	21	Head, shoulder and arm injured.....	Derailed motor.....	No. 10.....	Athens.
June 3.....	.....	American....	26	Leg broken.....	Slipping and falling from mine car.....	Superior No. 3.....	Athens.

Date	Name	Nationality	Age	Part of Body Injured	Particulars	Location	Result
June 12	Charles Kinder	American	46	Leg broken	Run over by mine car	Kennon	Belmont.
June 14	A. Turski	German	62	Rib fractured	Fall of coal	Peacock Old	Melga.
June 15	J. W. Henry	American	25	Leg broken	Fall of coal	Oakwood	Stark.
June 16	Wm. Copas	American	24	Ankle broken	Collision with mine car	Edwards No. 1	Muskingum.
June 16	Robert Young	English	35	Finger taken off	Coupling mine cars	Superior No. 3	Jackson.
June 18	John Urkuhart	Scotch	21	Back and breast injured	Fall of slate	Luhlig No. 2	Athens.
June 19	Pearl Hood	American	28	Hips and back injured	Caught between railway cars	No. 3	Perry.
June 20	Peter Mostek	Pole	30	Hips and back injured	Fall of soapstone	Lost Run	Hocking.
June 20	Jonas Long	American	56	Collar bone and three ribs broken	Fall of draw-slate	Wheeling Creek	Belmont.
June 20	Wyatt McKnight	American	59	Hips and back injured	Attempting to board loaded mine cars	Keystone No. 1	Perry.
June 20	Richard Lewis	Welsh	22	Seriously burned	Shots fired too rapidly in succession	Peacock Old	Melga.
June 20	John Lewis	Welsh	18	Seriously burned	Shots fired too rapidly in succession	Somerdale No. 2	Tuscarawas.
June 20	Henry Johnson	English	27	Seriously burned	Shots fired too rapidly in succession	Somerdale No. 2	Tuscarawas.
June 20	Edward Thomas	Welsh	23	Seriously burned	Shots fired too rapidly in succession	Somerdale No. 2	Tuscarawas.
June 20	Thomas Thomas	Welsh	20	Seriously burned	Shots fired too rapidly in succession	Somerdale No. 2	Tuscarawas.
June 23	Robert Sellars	American	22	Foot injured	Riding on loaded trip	Syracuse Shaft	Tuscarawas.
June 23	Hurt Dolant	Slav	24	Leg broken	Mine car	Edgar No. 2	Melga.
June 23	Allen Clayton	German	33	Seriously injured	Caught between mine car and rib	Empire No. 1	Jefferson.
June 25	Ben J. Ridley	English	35	Injured internally; also back injured			Belmont.
June 27	Hiram Schnelder	American	36	Three ribs broken	Fall of stone	Fox Lake No. 10	Summit.
June 28	Chas. Kochenspaugen	American	33	Toe taken off	Fall of slate	Northern	Jackson.
July 2	Thomas Price	English	30	Two ribs broken	Caught in the dump	No. 9	Perry.
July 3	Egnos Hooser	Hungarian	24	Seriously injured	Fall of slate	Elm Run No. 4	Stark.
July 3	Jno. W. Harper	English	35	Hand injured	Fall of roof	Adena	Harrison.
July 7	Concile Decline	Italian	42	Head and foot injured	Struck by a pick	Fox Lake No. 10	Summit.
July 7	N. A. Swanson	Swede	56	Ankle sprained	Fall of stone	West Goshen	Tuscarawas.
July 8	Linn Gulsine	Polish	38	Leg broken and back injured	Fall of coal and slate	No. 6	Portage.
July 8	Wm. Stanley	American	24	Finger mashed	Fall of soapstone	Wheeling Creek	Belmont.
July 8	Wm. Vansky	American	56	Leg broken and back bruised	Mine cars jumping the track	McLeish	Athens.
July 9	Frank Pouk	Slav	30	Face and body burned	Fall of coal	Luhlig No. 2	Athens.
July 10	M. Vermaten	German	58	Foot broken	Explosion of powder	West Pittsburgh	Jefferson.
					Run over by mine car	No. 17	Athens.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
July 11, 1902.	John Hornott.	Hungarian	23	Face and hands burned	Explosion of powder	Adena	Harrison.
July 15	C. W. Dunbar.	American	35	Leg broken	Fall of slate	Hocking Valley	Athens.
July 15	James Webb.	American	48	Leg broken	Mine car	Hiawatha	Athens.
July 15	Thomas Smith.	Welsh	33	Back injured	Fall of slate	Pigeon Run	Stark.
July 15	John Proctor.	American	27	Head cut and back sprained	Fall of slate	Lost Run	Hocking.
July 16	Bert Shaul.	American	23	Ribs broken	Fall of bone coal.	Pocock No. 3	Stark.
July 17	Carl McAllister.	American	17	Ribs broken	Kicked by a mule.	Lahrig No. 1	Athens.
July 19	Wm. Cullison.	American	25	Leg broken and ankle bruised	Caught by mine cars	Hocking Valley	Athens.
July 21	Jas. Schlanc.	Bohemian	54	Hand mashed	Fall of coal	O. & W. Va.	Belmont.
July 21	G. W. Graham.	American	19	Skull fractured	Fall of top coal	Lahrig No. 1	Athens.
July 22	W. J. Davis.	American	42	Shoulder injured	Caught between mine cars	Lahrig No. 1	Athens.
July 23	Mike Bushka.	Polish	42	Shoulder and hand injured	Fall of rock	E. Goshen No. 2	Tuscarawas.
July 23	G. Evans.	Welsh	30	Finger broken	Fall of coal	Pocock	Stark.
July 23	Steve Vazzarskiz.	Hungarian	24	Leg broken	Fall of stone	Glen Run	Jefferson.
July 26	John Parker.	German	68	Head injured	Fall of slate	Massillon No. 4	Stark.
July 26	Jesse Moore.	American	19	Finger taken off	Mine car	Gaylord.	Belmont.
July 26	Thos. Neal.	Irish	65	Back and shoulder injured	Fall of coal	Furnace No. 2	Perry.
July 29	John Varoney.	Finland	40	Head cut and two ribs broken	Fall of coal	No. 24	Athens.
August 1	Jack Nalrn.	American	25	Leg broken	Fall of roof	Bell Run	Athens.
August 5	John Ryan.	Irish	52	Face and hands burned	Explosion of gas	Lahrig	Athens.
August 6	Joe Kakini.	Italian	23	Leg broken	Fall of roof	Connor No. 1	Athens.
August 6	Wm. Wallace.	American	21	Hand mashed	Mine car jumping the track	No. 16	Jefferson.
August 11	A. C. Slator.	American	37	Leg broken	Fall of coal	Cobb	Athens.
August 11	Chas. Valentine.	American	40	Head and arms injured	Fall of coal		Lawrence.
August 11	Dell Long.	American	24	Head and arms injured	Fall of slate	Kings	Guernsey.
August 16	Lawrence Lancaster.	American	24	Head and arms injured	Fall of slate	Kings	Guernsey.
August 20	C. Bolshesfel.	American	14	Arm fractured	Caught between mine cars	Pekin	Athens.
August 22	Joe Jaknblain.	Polish Slav	23	Back sprained	Fall of slate		
August 22			38	Ankle injured	Ms.		

September 15	John Filzer	American	55	Head injured	Premature explosion	Fluhart No. 3	Jackson.
September 15	Amos Monti	Slav	48	Leg broken	Fail of draw-slate	Glen Run No. 2	Jefferson.
September 15	Daniel Lynch	English	49	Leg broken	Fail of stone	Pocock	Stark.
September 15	Wm. Lane	Welsh	12	Arm and leg taken off	Falling under loaded cars	No. 10	Athens.
September 21	Wm. Frew	Scotch	20	Seriously injured	Pipe getting off cage	Mingwood No. 2	Stark.
September 22	Edw. Vinson	American	25	Leg broken	Fail of coal	Kings	Guernsey.
September 23	Thomas Heath	American	23	Collar bone broken	Mine cars	Empire No. 1	Belmont.
September 27	John W. Thomas	Welsh	39	Leg broken	Falling in front of loaded mine cars	Davis No. 2	Carroll.
September 27	Mike Gomlach	Hungarian	36	Back injured	Fail of soapstone	Canon No. 2	Jefferson.
September 28	Tim Dester	American	44	Both legs broken	Trip rope breaking	New Pitts. No. 3	Hocking.
September 29	Tim Holmes	Irish	41	Foot mashed	Trip rope breaking	New Pitts. No. 3	Hocking.
October 1	James Ward	American	27	Shoulder dislocated	Fail of slate	Hartford	Guernsey.
October 1	Joe Coville	American	35	Finger cut off	Caught between car and tall chain	Thompson Run E.	Tuscarawas.
October 2	Alex Jaden	Hungarian	28	Hip dislocated	Fail of stone	Long Run	Jefferson.
October 3	John W. Oliver	American	21	Hand mashed	Fail of slate	No. 206	Athens.
October 3	Wm. Tracy	American	40	Eye knocked out	Kicked by a mule	Lyonsdale	Perry.
October 3	Pan Bowen	Welsh	46	Ribs torn loose, and badly bruised			
October 4	Frank Barr	American	45	Back injured	Fail of slate	Standard	Jackson.
October 4	Chas. Moran	American	18	Foot injured	Fail of stone	Elm Run No. 4	Stark.
October 6	Christ Stiran	German	58	Back sprained	Attempting to step on car bumper	Thompson Run E.	Tuscarawas.
October 6	Andy Doka	Hungarian	45	Hand injured	Fail of rock	Midvale No. 2	Tuscarawas.
October 7	Harry Tague	American	19	Foot mashed	Fail of stone	Wheeling Creek	Belmont.
October 7	Pennis Horshline	Hungarian	33	Leg broken	Run over by mine cars	Lyonsdale	Perry.
October 8	Hugh Hoag	American	22	Arm broken	Fail of coal	Long Run	Jefferson.
October 9	Wesley Campbell	American	22	Leg broken in two places	Fail of slate	McLeish	Athens.
October 13	John Rush	American	30	Seriously burned	Fail of coal	No. 20	Perry.
October 15	Levi Straum	American	50	Head cut and shoulder bruised	Explosion of gas	Sedalia	Athens.
October 15	John Edwards	Welsh	50	Leg broken	Fail of slate	No. 206	Athens.
October 15	Gorden Cottrell	American	50	Hand injured	Falling under loaded mine cars	Upson No. 2	Perry.
October 16	Peter Nebotney	Slav	43	Hip sprained	Fail of stone	Wheeling Creek	Belmont.
October 17	P. Spangler	American	35	Hip and ankle sprained	Fail of slate	Nicholson	Guernsey.
October 18	Harry Meyers	American	48	Collar bone broken	Fail of coal	No. 13	Stark.
October 18	Emery Polser	Hungarian	17	Foot cut off	Run over by mining machine	New Pitts. No. 3	Hocking.
October 18	Fred Harvey	Afro-Amer.	27	Shoulder broken	Fail of slate	Long Run	Jefferson.
October 20	Price Holdsworth	American	21	Arm broken	Fail of coal	Cedar Hill	Columbiana.
October 21	David Collins	American	52	Arm broken	Falling from mine car	Conesville	Cochocton.
October 21			52			Kings	Guernsey.

TABLE SHOWING SERIOUS ACCIDENTS DURING THE YEAR—Concluded.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1902.							
October 21.....	Paul Gross.....	German.....	19	Finger mashed.....	Mine car.....	Morgan Run No. 3	Coshocton.
October 21.....	Harry Sterling.....	American.....	18	Back injured.....	Fall of slate.....	Dillon No. 2.....	Jefferson.
October 23.....	Joe Black.....	American.....	30	Ankle injured.....	Caught with mining machine.....	Empire No. 1.....	Belmont.
October 24.....	George Yearee.....	English.....	35	Back and ankle sprained.....	Fall of bone coal.....	Walnut Hill.....	Muskingum.
October 24.....	Ross Shoemate.....	American.....	23	Leg seriously in- jured.....	Fall of slate.....	Jones & Morgan No. 3.....	Jackson.
October 28.....	Wm. Fitzgerald.....	American.....	44	Head and body in- jured.....	Motor car.....	Adena.....	Harrison.
November 2.....	Geo. Garlow.....	American.....	35	Leg broken.....	Ry replacing prop.....	Black Diamond.....	Belmont.
November 4.....	Fred Livingston.....	American.....	21	Head injured.....	Rope chain breaking.....	Connor No. 1.....	Jefferson.
November 4.....	John Staats.....	American.....	37	Hips injured; also internally.....	Fall of slate.....	Empire No. 2.....	Belmont.
November 7.....	Chas. Oshenski.....	German.....	36	Leg injured.....	Fall of draw-slate.....	McGinty.....	Stark.
November 11.....	John Coyne.....	Irish.....	35	Head cut and shoulder dislo- cated.....	Fall of slate.....	No. 12.....	Perry.
November 12.....	Fred Kettler.....	German.....	48	Back and hips in- jured.....	Fall of slate.....	Superior No. 6.....	Jackson.
November 13.....	John Borkevski.....	Slav.....	22	Seriously injured.....	Caught between mine cars.....	Pioneer No. 2.....	Guernsey.
November 14.....	Jacob Willis.....	German.....	25	Ankle broken.....	Fall of draw-slate.....	Superior No. 3.....	Jackson.
November 15.....	Henry Canton.....	American.....	48	Rib broken.....		Superior No. 4.....	Jackson.

TABLE SHOWING MINES ACCIDENTS DURING THE YEAR

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1901.							
November 19.	S. Patterson.	...		Leg injured.	Fall of slate	Imperial	Guernsey.
November 19.	Charles Williams.	...		Foot injured.	Fall of slate	Imperial	Guernsey.
November 26.	Jacob Hart.	...		Leg injured.	Fall of draw-slate	Rockville	Belga.
November 28.	H. Tandy.	...		Hand injured.	Caught between mine car and rib.	Imperial	Guernsey.
November 28.	Charles Brick.	...		Shoulder bruised.	Fall of coal	Acme	Tuscarawaa.
November 29.	Thomas Roberts.	...		Slightly injured.	Fall of coal	Shawnee Valley	Perry.
November 30.	Tom Murphy.	...		Back and hips injured.	Caught between mine cars.	Jobs No. 2.	Hocking.
December 1.	Robert Feather-Ingham	...		Shoulder injured.	Caught between mine car and roof.	Woodland	Stark.
December 2.	F. Norman.	...		Foot mashed.	Mine car	Imperial	Guernsey.
December 2.	John Kingen.	...		Hand cut.	Caught between mine car and rib.	Singer No. 1.	Stark.
December 5.	Walter Bruno.	...		Hand injured.	Caught under mine car.	Kelley	Jefferson.
December 7.	Wm. Kimes.	...		Ankle injured.	Caught between mine cars.	Black Diamond.	Athens.
December 11.	John Parker.	...		Side injured.	Fall of coal	Mass. Min. Co. No. 1	Stark.
December 13.	James D. Jones.	...		End of thumb cut off.	Caught between sprag and wheel.	Mass. Min. Co. No. 1	Stark.
December 14.	Jos. Collier.	...		Head injured.	Fall of slate	Warwick No. 1.	Stark.
December 16.	Robert Armitage.	...		Ankle injured.	Struck by a mine car.	Rush Run	Jefferson.
December 17.	Ed. Davis.	...		Leg injured.	Kicked in the face by a mule.	Machine	Jackson.
December 21.	W. P. Johnson.	...		Leg injured.	Coupling mine cars.	Kelley	Jefferson.
December 23.	Geo. Donley.	...		...	Injured by being squeezed between mine car and post.	Nicholson	Guernsey.
December 23.	J. B. Young.	...		Big toe mashed.	Mining machine	Ideal	Guernsey.
1902.							
January 3.	James Page.	American	27	Foot injured.	Mine cars	Kings	Guernsey.
January 6.	Isaac Trout.	American	42	Back and shoulder injured.	Fall of draw-slate	Ingham	Vinton.
January 6.	Alex Miller.	American	21	Back injured.	Caught between mine car and rib.	Singer No. 1.	Stark.
January 6.	John McNeal.	American	17	Foot injured.	Mine cars	Kings	Guernsey.
January 6.	Alonzo Williams.	American	64	Face and hands burned.	Explosion of powder	Keystone No. 3.	Perry.
January 9.	John Hodgins.	...	19	Head injured.	Injured by a fall of slate.	Walhounding	Guernsey.
January 13.	Henry Stemley.	American	28	Head injured.	Fall of slate	Brookfield No. 6.	Stark.
January 13.	John Blocker.	Slav	42	Head injured.	Fall of slate	Rush Run	Jefferson.
January 14.	Homer Westlake.	American	30	Foot injured.	Fall of slate	New Shaft	Columbiana.
January 14.	Andrew Chepon.	Slav	44	Foot injured.	Injured by a fall of slate.	Rush Run	Jefferson.
January 15.	Dwight Secret.	American	21	Head injured.	Fall of timber	Cisco	Guernsey.

TABLE SHOWING MINOR ACCIDENTS DURING THE YEAR—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1902							
January 15.....	Bert Carter.....	American.....	21	Leg injured.....	Fall of coal.....	No. 3.....	Athens.
January 16.....	Chas. Brinley.....	American.....	27	Foot injured.....	Caught between tracks.....	Rush Run.....	Jefferson.
January 18.....	David Harris.....	English.....	35	Wrist injured.....	Fall of soapstone.....	Crescent No. 3.....	Belmont.
January 20.....	Ben James.....	American.....	30	Ankle injured.....	Fall of slate.....	O. & W. Va.....	Belmont.
January 20.....	John Davis.....	American.....	26	.....	Injured by being kicked by a mule.....	Elmhurst No. 3.....	Jackson.
January 24.....	Covey Candido.....	Italian.....	40	Finger injured.....	Caught between car bumpers.....	Wheeling Creek.....	Belmont.
January 27.....	Edw. Stewart.....	American.....	32	Foot sprained.....	Caught by a mine car.....	Luhrig No. 2.....	Athens.
January 28.....	Edw. Souders.....	American.....	45	Face and breast injured.....	Explosion of powder.....	Superior No. 3.....	Jackson.
January 28.....	Harry Booth.....	American.....	20	Hand injured.....	Kicked by a mule.....	Elmhurst No. 1.....	Jackson.
January 28.....	Enoch Richards.....	Welsh.....	60	Foot injured.....	Fall of coal.....	Deerfield.....	Portage.
February 1.....	Winfield Jones.....	American.....	25	Foot injured.....	Caught by a mine car.....	John No. 17.....	Athens.
February 4.....	Geo. Whelling.....	American.....	27	Leg injured.....	Loaded mine car.....	New Shaft.....	Columbiana.
February 15.....	Chas. Spencer.....	American.....	37	Finger injured.....	Run over by mine car.....	Sycamore.....	Hooking.
February 15.....	Jos. Sumpton.....	American.....	40	Leg injured.....	Fall of slate.....	Star No. 4.....	Jackson.
February 17.....	Ben Davis.....	Welsh.....	44	Head cut.....	Fall of coal.....	Luhrig No. 2.....	Athens.
February 17.....	Wash Shelton.....	American.....	40	Leg and hip injured.....	Fall of slate.....	No. 12.....	Perry.
February 18.....	Fred Beum.....	American.....	24	.....	Injured by mine cars.....	Turkey Foot.....	Summit.
February 18.....	Wm. Grandy.....	American.....	19	Ankle injured.....	Caught between mine car and rib.....	Phoenix No. 2.....	Athens.
February 20.....	John Hogle.....	Slav.....	23	Foot injured.....	Fall of stone.....	Dillon No. 2.....	Jefferson.
February 22.....	Everett Townsend.....	American.....	20	Arm injured.....	Caught between mine car and roof.....	Milton No. 3.....	Jackson.
February 22.....	Chas. Mendenhall.....	American.....	31	Breast injured.....	Fall of slate.....	Imperial.....	Guernsey.
February 25.....	Charles Jones.....	American.....	30	Foot injured.....	Fall of coal.....	New Shaft.....	Columbiana.
February 25.....	Ross Meadows.....	Afro-Amer.....	30	Back injured.....	Fall of slate.....	Putney.....	Belmont.
February 27.....	Robert Holt.....	English.....	28	.....	Injured by a premature explosion.....	Fairview No. 3.....	Mahoning.
February 28.....	Wm. Evans.....	Welsh.....	45	.....	Injured by being caught between mine cars.....	Whelan No. 2.....	Medina.
March 4.....	O. N. Shaffer.....	American.....	47	Hand cut.....	Fall of stone.....	Nail Mill.....	Belmont.
March 5.....	John Madison.....	Irish.....	28	Foot injured.....	Fall of slate.....	New Shaft.....	Columbiana.
March 10.....	Arthur McCulloh.....	Irish.....	55	Back injured.....	Fall of slate.....	Teunor & Byron.....	Jefferson.
February 15.....	James Board.....	American.....	31	.....	Injured by being dragged by an electric motor.....	Empire No. 2.....	Belmont.
March 25.....	Marlon Baer.....	American.....	19	Ankle and foot injured.....	Mine car jumped the track.....	Price.....	Jackson.
March 26.....	Thos. Burk.....	Irish.....	51	.....	.....	Star.....	Star.

Date	Name	Nationality	Age	Part Injured	Cause of Injury	Location	Company
April 8	Lloyd Freeman	American	21	Head and back injured	Fall of coal	Wainwright No. 4.	Tuscarawas.
April 16	Robert Scott	English	28	Head and back injured	Injured by being squeezed between mine cars	Diamond	Muskingum.
April 16	Wm. Summerville	Scotch Irish	36	Leg injured	Fall of slate	Trail Run	Guernsey.
April 17	Mike Cabinal	Welsh	42	Face and body injured	Shot blowing through the rib	Fairview	Mahoning.
April 21	John Reese	American	39	Breast injured	Fall of slate	Masillon-Peacock	Stark.
April 21	Wm. Fithen	Hungarian	46	Back and breast injured	Fall of stone	Syracuse Shaft	Meigs.
April 23	Charles Baker	American	65	Hand injured	Fall of coal	Ruah Run	Jefferson.
April 26	Edward Hise	American	36	Breast injured	Injured by a brake on a car	Kings	Guernsey.
April 28	Hed Bigum	American	24	Back injured	Kicked by a horse	Sycamore	Hocking.
April 30	E. E. Forster	American	29	Foot injured	Fall of soapstone	No. 18	Perry.
April 30	Barnest Cottes	American	26	Head injured	Fall of slate	O. & W. Va.	Belmont.
May 3	Sam Claypool	American	31	Head injured	Fall of slate	Broadwell	Athens.
May 5	E. Lewis	American	23	Shoulder injured	Fall of draw-slate	Kimberly No. 204.	Athens.
May 10	Thomas Hysell	American	23	Foot injured	Run over by mine car	Keystone No. 1	Muskingum.
May 13	Charles Harper	American	19	Leg cut and bruised	Squeezed between car and mule	Luhrlig	Athens.
May 13	A. Holdsworth	German	22	Shoulder dislocated	Injured by being caught between roof and water box	Imperial	Guernsey.
May 16	Isaac Scott	American	23	Back and hip bruised	Caught by a cage	Imperial	Guernsey.
May 19	Jno. W. Sutcliffe	English	36	Hip dislocated	Fall of slate	Leathernwood No. 1	Guernsey.
May 20	Frank Rosenanski	Pole	26	Foot injured	By a cross-bar	Hutson No. 5	Portage.
May 23	Hugh Jordan	Irish	22	Head cut	Fall of coal	Kimberly No. 204.	Athens.
May 26	Thomas Richards	Welsh	20	Limbs bruised	By pushing mine cars	Minglewood No. 2	Stark.
May 26	Pat Mahaffy	Pole	33	Arm injured	Caught by a draw-bar	Bestie Bros.	Stark.
May 27	Alex Pottsavage	American	31	Foot and back bruised	Car knocking out a post	Woodland	Hocking.
May 28	Chas. Chappalear	Welsh	30	Shoulder and chest bruised	Fall of draw-slate	No. 17	Stark.
May 31	Wm. Meeker	American	59	Head injured	Injured by a fall of loose roof	Gaylord	Athens.
June 3	Evan Jenkins	American	17	Toe injured	Mine car	Deerfield	Belmont.
June 7	George Moore	American	24	Hand injured	Injured by being caught between mine cars	Crescent No. 3	Portage.
June 10	Alex Smith	American	31	Arm bruised	Fall of coal	No. 17	Belmont.
June 12	John Campbell	Welsh	24	Foot injured	Injured by a mule	No. 17	Athens.
June 14	Elsworth Pickens	American	22	Face injured	By a sled	McGliny	Athens.
June 15	John Davis	American	45	Hand bruised	Fall of roof	Greenville	Stark.
June 18	Umph Bane	American	38	Foot injured	Fall of slate	Dillon No. 2	Stark.
June 23	Lelat Durlain	American	22	Face injured	By a mule	McGliny	Jefferson.
June 23	Tony Monthread	Hungarian	22	Foot injured	Fall of slate	Empire No. 1	Stark.
June 26	Sam. Hockinberger	American	45	Hand bruised	Fall of roof	Warwick	Belmont.
July 1	Mike Keefer	German	36	Foot injured	Fall of slate	Old Orchard	Summit.
July 1	Mike Verb	Slav	38	Foot injured	Fall of slate	Old Orchard	Guernsey.

TABLE SHOWING MINOR ACCIDENTS DURING THE YEAR—Concluded.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
July 3, 1902.	Dan Willhuff	American	28	Foot mashed and head bruised.	Fall of rock	Cob No. 20	Lawrence.
July 6	Jacob Butterfield	English	15	Hips injured.	Fall of slate	No. 15	Perry.
July 8	Wm. Bowman	American	18	Head injured.	Premature explosion		Start.
July 11	John Ward	American	24	Ankle sprained and foot injured.			
July 15	Tony Miller	Pole	19	Back and head injured.	Caught under car bumpers	Milton No. 3	Jackson.
July 16	Wm. Jones	Welsh	29	Leg injured.	Fall of stone	Long Run	Jefferson.
July 17	Walter Hawkins	Afro-Amer.	28	Hand injured.	Mine car jumping the track	Greenville	Start.
July 17	Edward Fair	American	30	Hand injured.	Mine car jumping the track	Long Run	Jefferson.
July 19	Lewis Staten	American	29	Face injured.	Injured by being kicked by a mule	Fluhart No. 1	Jackson.
July 21	Mike Lucas	Bohemian	26	Face injured.	Fall of slate	Doanville No. 1	Athens.
July 22	Henry Fairhurst	English	20	Ankle injured.	Fall of stone	Nail Mill	Belmont.
July 24	John Shepard	American	45	Shoulder injured.	Caught between mine cars	Trail Run	Guernsey.
July 26	Jos. Thompson	Scotch	19	Knee injured.	Fall of coal	Cobb	Lawrence.
July 28	John Popeln	Slav	40	Head injured.	Fall of coal	Furnace No. 2	Perry.
July 30	Mike Lucas	Slav	17	Leg bruised.	Falling against a mine car.	New Pitts. No. 5.	Athens.
August 2	James Smet	American	25	Face and head injured.	Fall of coal	Forsythe	Guernsey.
August 12	Frank Oliver	American	17	Face and head injured.	Mine cars	Kings	Guernsey.
August 12	Lewis Oliver	American	19	Ankle and leg cut.	Injured and bruised by a fall of slate	No. 205	Athens.
August 19	John Bolsler	English	22	Finger mashed.	Injured and bruised by a fall of slate	No. 205	Athens.
August 23	David L. Price	Welsh	22	Leg injured.	Caught between the roof and door.	Massillon No. 1	Start.
August 28	Fred Scott	American	21	Hand injured.	Fall of coal	Sugar Creek	Tuscarawas.
September 9	Alexander Jones	American	21	Hand injured.	Fall of slate	Jahrig	Athens.
September 16	Chas. Reed	American	32	Arm injured.	Caught by an empty mine car.	Lady Grange	Perry.
September 20	John Sherman	American	33	Hand injured.	Fall of slate	Lyonsdale	Perry.
September 20	Alfred Dorman	Welsh	49	Hand and back injured.	Caught between mine car and roof	Fluhart No. 1	Jackson.
September 22	Jno. Whitfield	English	50	Ankle dislocated.	Fall of slate	No. 9	Start.
September 22	Benj. Rogers	American	40	Finger injured.	Fall of coal	Start.	Start.
September 25	Wm. Haught	American	24	Face cut and back injured.	Mining machine	Lyonsdale	Perry.
					Fall of stone	Captina Pitts. No. 8	Belmont.

Month	Name	Natural Cause	Part of Body Injured	Age	Occupation	Place
October 9	James Belville	Run over by mine cars	Foot injured	20	American	Belmont.
October 10	Theo. Thomas	Run over by mine cars	Foot mashed	29	American	Belmont.
October 11	Wm. Dowdy	Falling under loaded mine cars	Hips bruised	23	English	Athens.
October 13	Wm. Morris	Run over by mining machine	Leg injured	24	English	Athens.
October 22	Wm. Reader	Caught between mine car and roof	Arm injured	27	American	Jefferson.
October 22	John Harris	Fall of draw-slate	Finger mashed	34	American	Fortage.
October 27	John P. Thompson	Injured by a fall of slate	...	33	American	Fortage.
October 28	John Lewis	Caught between mine cars	Ankle bruised	35	Welsh	Rocking.
November 1	Charles Cole	Caught between mine cars	Foot injured	21	American	Fortage.
November 4	R. L. Davis	Coal from a flying shot	Leg injured	45	American	Fortage.
November 5	James Bingham	Mine cars	Leg injured	26	American	Jackson.
November 6	Earl Hammond	Fall of slate	Head cut	16	American	Jackson.
November 7	Steve Halos	Fall of slate	Chest bruised	35	Slav	Guernsey.
November 11	Smith Masters	Caught by a mine car	Foot injured	40	American	Guernsey.
November 14	Fred Warner	Uncoupling mine cars	Finger mashed	33	American	Columbiana.

INSPECTORS AND DISTRICTS INTO WHICH THE STATE IS DIVIDED

ELMER G. BIDDISON,

Chief Inspector of Mines, Columbus, Ohio.

FIRST DISTRICT.

Composed of the counties of Hocking, Jackson, Scioto and Vinton.

R. M. MASON, *Inspector.*
Logan, Hocking County, Oh

SECOND DISTRICT.

Composed of the counties of Athens, Gallia, Lawrence, Meigs and Washington.

D. H. WILLIAMS, *Inspector.*
Glouster, Athens County, Oh

THIRD DISTRICT.

Composed of the counties of Muskingum, Morgan, Noble and Perry.

D. B. WILSON, *Inspector.*
Corning, Perry County, Oh

FOURTH DISTRICT.

Composed of the counties of Monroe, Belmont, Harrison and Jefferson.

THOMAS MCGOUGH, *Inspector.*
Bridgeport, Belmont County, O

FIFTH DISTRICT.

Composed of the counties of Guernsey, Coshocton and Tuscarawas.

W. H. TURNER, *Inspector.*
Cambridge, Guernsey County, C

SIXTH DISTRICT.

Composed of the counties of Carroll, Columbiana, Mahoning, Trumbull and Portage.

JAMES P. DAVIS, *Inspector.*
Dell Roy, Carroll County, C

SEVENTH DISTRICT.

Composed of the counties of Medina, Stark, Summit, Wayne and Holmes.

W. H. MILLER, *Inspector.*
Massillon, Stark County, C

THE FIRST MINING DISTRICT.

The First Mining District is composed of the Counties of Hocking, Jackson, Scioto and Vinton, and is under the personal supervision of R. M. Mason, Logan, Ohio. The combined output of this district amounted to 553,702 tons. Two hundred and two (202) visits were made in this district during the year 1902. Mr. Mason also has charge of the New Pittsburgh No. 4 and No. 5 Mines, located in Athens county. Superior No. 8, No. 9 and No. 10 mines, located in Jackson county, and opened up during the year, will install electrical machinery and will be operated on an extensive scale.

The condition of employment in a general way during the year was the best and most satisfactory in the history of the Coal Industry, there being no strikes only of a local nature. In Jackson county the coal lands are being rapidly taken up. What is known as the Jackson Hill and Wellington seams of coal are practically worked out. Approximately from thirty to forty thousand acres of coal land have already been worked out. The No. 4 and No. 5 seams of coal also appear in this county which may develop into considerable importance, and is estimated at about twenty-eight thousand acres. In Hocking county the undeveloped coal lands are estimated to be fourteen thousand acres, and is also being rapidly taken up. In this county the mines are mostly drifts and penetrate the No. 6 seam of coal. Large consignments of this coal are shipped to the Northwest. The coal is of good quality and is used for domestic and steam purposes.

In Jackson county the shafts vary in depth from 47 to 210 feet. The Nos. 1, 2, 3, 4, 5, and 6 seams of coal appear. The Jackson No. 2 seam of coal is shipped mostly to Eastern markets, is of good quality, and is used for steam and domestic purposes. The mines of which this district is composed worked about two-thirds time. Sixteen (16) fatal accidents are reported from this district during the inspection year.

FIRST DISTRICT.

R. M. MASON, *Inspector*, Logan, Ohio.

HOCKING COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
New Pittsburg No. 2.....	New Pittsburg Coal Co., Columbus, O.....	.....
New Pittsburg No. 3.....	New Pittsburg Coal Co., Columbus, O.....	.....
New Pittsburg No. 6.....	New Pittsburg Coal Co., Columbus, O.....	.....
New Pittsburg No. 7.....	New Pittsburg Coal Co., Columbus, O.....	.....
Sand Run New.....	Buckeye Coal and Ry. Co., Columbus, O.....	Edward Fluke, Job
Brush Fork No. 2.....	Buckeye Coal and Ry. Co., Columbus, O.....	Edward Fluke, Job
Brush Fork No. 3.....	Buckeye Coal and Ry. Co., Columbus, O.....	Edward Fluke, Job
No. 15 or Big Four.....	Jacoby Coal Co., Sand Run, O.....	.....
Coalgate.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glen
Brenholz or No. 102.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glen
Snake Hollow.....	C. L. Poston & Co., Nelsonville, O.....	L. D. Poston, Nelson
Stalter No. 1.....	R. Stalter Coal Co., Nelsonville, O.....	.....
Black Diamond.....	Haydenville Mining Co., Haydenville, O.....	J. W. Jones, Hayde
Beattie Bros.....	Beattie Bros., Nelsonville, O.....	.....

JACKSON COUNTY.

Superior No. 1.....	Superior Coal Co., Jackson, O.....	H. C. Murphree, Jac
Superior No. 2.....	Superior Coal Co., Jackson, O.....	H. C. Murphree, Jac
Superior No. 3.....	Superior Coal Co., Jackson, O.....	H. C. Murphree, Jac
Superior No. 4.....	Superior Coal Co., Jackson, O.....	N. M. White, Jack
Superior No. 5.....	Superior Coal Co., Jackson, O.....	George Wheldon, O
Superior No. 6.....	Superior Coal Co., Jackson, O.....	.....
Superior No. 7.....	Superior Coal Co., Jackson, O.....	N. M. White, Jack
Superior No. 8.....	Superior Coal Co., Jackson, O.....	N. M. White, Jack
Superior No. 9.....	Superior Coal Co., Jackson, O.....	N. M. White, Jack
Superior No. 10.....	Superior Coal Co., Jackson, O.....	N. M. White, Jack
Chapman.....	Chapman Coal Co., Jackson, O.....	J. E. Hayes, Chapm
Grace.....	Chapman Coal Co., Jackson, O.....	J. E. Hayes, Chapm
Springfield.....	Chapman Coal Co., Jackson, O.....	J. E. Hayes, Chapm
Fluhart No. 1.....	Fluhart Coal Co., Wellston, O.....	Theodore Fluhart,
Fluhart No. 2.....	Fluhart Coal Co., Wellston, O.....	ton, O.
Fluhart No. 3.....	Fluhart Coal Co., Wellston, O.....	Theodore Fluhart,
Milton No. 2.....	Milton Coal Co., Wellston, O.....	ton, O.
Milton No. 3.....	Milton Coal Co., Wellston, O.....	Theodore Fluhart,
Jones No. 3.....	Jones Coal Co., Jackson, O.*.....	ton, O.
Acorn or Jones Slope.....	Jones Coal Co., Jackson, O.*.....	W. B. Montgomery,
Emma New.....	Emma Coal Co., Jackson, O.....	ton, O.
Emma No. 3.....	Emma Coal Co., Jackson, O.....	W. B. Montgomery,
Comet.....	Comet Coal Co., Wellston, O.....	ton, O.
Comet No. 2.....	Comet Coal Co., Wellston, O.....	J. E. Jones, Jacks
Northern.....	Jones & Morgan, Jackson, O.....	J. E. Jones, Jacks
Jones & Morgan.....	Jones & Morgan, Jackson, O.....	Edwin Jones, Jack
Wellston No. 3.....	Wellston Coal Co., Wellston, O.....	Edwin Jones, Jack
Tom Corwin No. 1.....	Tom Corwin Coal Co., Dayton, O.....	D. R. Billingsly, W
Machine Coal Co.....	Machine Coal Co., Dayton, O.....	Ohio
Wainwright.....	Wainwright Coal Co., Wellston, O.....	.....
Buckeye No. 2.....	Buckeye Coal Co., Coalton, O.....	T. J. Morgan, Wells
Alma.....	Alma Coal Co., Glen Roy, O.....	J. E. Harper, Glen
Eclipse.....	Eclipse Coal Co., Jackson, O.....	Evan Reese, Glen
Victor No. 1.....	Victor Coal Co., Coalton, O.....	George Harrison,
Standard.....	Standard Coal Co., Jackson, O.....	ford, O.
Coalton No. 3.....	Coalton Coal Co., Coalton, O.....	Elmer Sells, Coalto
Price.....	W. A. Gosline & Son, Toledo, O.....	Charles Davis, Gle
Globe No. 3.....	Globe Iron Co., Jackson, O.....	Ohio
		E. O. Roberts, Jack
		T. J. Evans, Coalto
		D. C. Jones, Jacks
		Norris Cameron, (
		Ohio
		J. C. Hurd, Jr., Jac
		J. E. Jones, Jacks

FIRST DISTRICT.

R. M. MASON, *Inspector*, Logan, Ohio.

HOCKING COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Fan	6	6 to 8	Double	Tail rope	H. V. R. R.
Drift	Fan	6	6	Double	Tail rope	H. V. R. R.
Drift	Fan	6	5 to 7	Double	Motor	H. V. R. R.
Drift	Fan	6	6 to 8	Double	Motor	H. V. R. R.
Drift	Fan	6	4 to 6	Double	Tail rope	H. V. R. R.
Drift	Fan	6	6	Double	Tail rope	H. V. R. R.
Drift	Fan	6	6	Double	Tail rope	H. V. R. R.
Drift	Fan	6	5 to 7	Double	Horses	H. V. R. R.
Drift	Fan	6	6	Double	Motor	H. V. R. R.
Drift	F. B.	6	6 to 8	Double	Motor	H. V. R. R.
Drift	Fan	6	6	Double	Tail rope	H. V. R. R.
Drift	Natural ..	6	6	Pillar	Horses	H. V. R. R.
Drift	F. B.	6	5 to 7	Single	Steam locom'te	H. V. R. R.
Drift	F. B.	6	6	Single	Horses	H. V. R. R.
Shaft, 180 ft.	Fan	2	3½	Double	Mule	O. S. & C. H. & D.
Shaft, 85 ft.	Fan	2	3½	Double	Mule	O. S. & C. H. & D.
Shaft, 47 ft.	Fan	2	4½	Double	Mule	B. & O. S. W.
Shaft, 77 ft.	Fan	2	3 to 4	Double	Mule	C. H. & D.
Drift	Fan	2	3½	Double	Mule	C. H. & D.
Slope, 120 ft.	Fan	2	4	Double	Tail rope	O. S. & C. H. & D.
Shaft, 120 ft.	Fan	2	3½	Double	Mule	Ohio Southern.
Shaft, 124 ft.	Fan	2	4	.....	Mule	B. & O. S. W.
Shaft, 116 ft.	Fan	2	.....	.....	Mule	C. H. & D.
Drift	Natural ..	4 to 5	4	Double	Mule	C. H. & D.
Drift	Furnace ..	2	3-10 in	Single	Mule	Ohio Southern.
Shaft, 90 ft.	Fan	2	3½	Single	Mule	Ohio Southern.
Shaft, 50 ft.	Fan	2	3½	Single	Mule	Ohio Southern.
Shaft, 84 ft.	Fan	2	4	Double	Mule	B. & O. S. W. & H.V.
Shaft, 167 ft.	Fan	2	3½	Double	Tail rope	B. & O. S. W. & H.V.
Shaft, 80 ft.	Fan	2	2 to 4	Double	Mules	B. & O. S. W. & H.V.
Shaft, 76 ft.	Fan	2	4	Double	Mules	B. & O. S. W.
Shaft, 80 ft.	Fan	2	2 to 4	Double	Motor	O. S. & C. H. & D.
Slope	Fan	12	2 to 3	.....	Mule	O. S. & C. H. & D.
Slope, 223 ft.	Fan	2	3½	Single	Mule	O. S. & C. H. & D.
Shaft, 102 ft.	Fan	2	3	Single	Mule	Ohio Southern.
Drift	Furnace ..	2	2 to 3	Single	Mule	Ohio Southern.
Shaft, 72 ft.	Fan	2	3 to 6	Double	Mule	Ohio Southern.
Shaft, 45 ft.	Fan	2	3½	Single	Mule	O. S. & C. H. & D.
Slope, 189 ft.	Fan	2	3 to 4	Single	Mule	O. S. & C. H. & D.
Shaft, 87 ft.	Fan	2	3 to 4	Double	Mule	C. H. & D.
Shaft, 90 ft.	Fan	2	3½	Double	Motor	O. S. & C. H. & D.
Shaft, 58 ft.	Fan	2	2 to 3	Double	Mule	B. & O. S. W.
Shaft, 96 ft.	Fan	2	2 to 5	Double	Mule	C. H. & D.
Drift	Furnace ..	2	2 to 3½	Single	Mule	C. H. & D.
Shaft, 72 ft.	Fan	2	3-10 in	Double	Mule	C. H. & D.
Drift	Furnace ..	2	2-3½	Single	Mule	Ohio Southern.
Drift	Furnace ..	2	2 to 3	Single	Mule	C. H. & D.
Shaft, 85 ft.	Fan	2	3	Single	Mule	O. S. & C. H. & D.
Slope, 213 ft.	Furnace ..	2	2-3½	Single	Mule	Ohio Southern.
Drift	Furnace ..	2	2-3½	Single	Mule	Ohio Southern.
Shaft, 111 ft.	Fan	1	2-3½	Double	Mule	Ohio Southern.

FIRST DISTRICT—Concluded.

JACKSON COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Superintendent Name and P. O. Address
Davis of Oak Hill.....	Thomas-Davis Coal Co., Oak Hill, O.....	Evan Davis, Oak Hill
Enterprise.....	Enterprise Coal Co., Jackson, O.....	John E. Jones, Jackson
Milton No. 4.....	Dayton Coal and Iron Co., Wellston, O.....	W. B. Montgomery, Wellston, O.....
Crescent.....	Crescent Coal Co., Jackson, O.....	John S. Jones, Jackson
Star No. 4.....	Star Furnace Coal Co., Jackson, O.....	J. J. Morgan, Jackson
McKitterick.....	McKitterick Coal Co., Jackson, O.....	W. D. Hippel, Coalton
Hurd Slope.....	Hippel Coal Co., Coalton, O.....	J. M. Armstrong, Jackson
Armstrong.....	Armstrong Coal Co., Jackson, O.....	Ohio
Copperhead.....	Jackson Hill Coal Min. Co., Sampsonville, O.....	F. C. Fuller, Sampsonville, Ohio
Skunk.....	Jackson Hill Coal Min. Co., Sampsonville, O.....	F. C. Fuller, Sampsonville, Ohio
McKell.....	Whelan Coal Co., Berlin X Roads, O.....	John Hall, Berlin X Roads, Ohio
White Eye.....	J. Rowe Coal Co., Coalton, O.....	Waite D. Gilbert, Coalton
Ridgeland.....	Ridgeland Coal Co., Ridgeland, O.....	Emmet Dungan, Ridgeland, Ohio
Symmes Creek.....	Symmes Creek Coal Co., Rempie, O.....	

SCIOTO COUNTY.

Irish Hollow.....	Hanging Rock Iron Co., Hanging Rock, O.....	
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VINTON COUNTY.

Star No. 2.....	Star Coal Co., Hawks, O.....	E. W. Keck, Hawks
Ingham.....	Moorehead Bros. & Jaynes, McArthur, O.....	O. C. Moorehead, McArthur, Ohio
Minerton.....	J. L. Lawler, Minerton, O.....	Wm. Ellis, Oreton
Oreton.....	Vinton Coal and Mining Co., Dayton, O.....	Carlus Goddard W. Oreton, Ohio
Rock.....	Cornelia Mining Co., Wellston, O.....	Carlus Goddard W. Oreton, Ohio
Cornelia No. 2.....	Cornelia Mining Co., Wellston, O.....	W. P. Porter, Elk Fork
Elk Fork.....	Elk Fork Coal Co., McArthur, O.....	A. Miller, Clarion
Seldom Seen.....	Lomax Coal Co., McArthur, O.....	
Clarion.....	Gallia Mining Co., Clarion, O.....	

FIRST DISTRICT—Concluded.

JACKSON COUNTY—Concluded.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Furnace ..	5	3	Single	Mule	B. & O. S. W.
Shaft, 98 ft.	Fan	2	2 to 3	Double	Mule	B. & O. S. W.
Shaft, 89 ft.	Fan	2	2 to 4	Double	Mule	C. H. & D.
Drift	Furnace	2	2 to 3	Single	Mule	Ohio Southern.
Drift	Fan	1	2 to 4	Single	Mule	Ohio Southern.
Drift	Furnace	5	2 to 3	Double	Mule	C. H. & D.
Slope, 135 ft.	Fan	2	2½ to 4	Single	Mule	Ohio Southern.
Slope, 110 ft.	Fan	2	2-3½	Single	Mule	Ohio Southern.
Drift .....	.....	5	2½ to 4	Double	Mule .....	.....
Drift	Furnace	5	2½ to 4	.....	Mule .....	.....
Drift	Fan	2	3 to 4	Double	Mule	B. & O. & C. H. & D.
Drift	Furnace	2	2-3	.....	Mule	Ohio Southern.
Drift	F. B.	5	2½ to 4	Double	Mule .....	.....
Drift	Furnace .....	.....	.....	.....	Mule .....	.....
Drift	Furnace	Block Ore.	2	Long wall...	Mule	B. & O. S. W.
Drift	Furnace	4	4½	Single	Mule	Hocking Valley.
Drift	Furnace	5	3½	Single	Mule	B. & O. S. W.
Drift	Furnace	4	4	Single	Mule	Hocking Valley.
Drift	Furnace	4	2 to 4	Single	Mule	Hocking Valley.
Shaft, 90 ft.	Fan	4	2 to 4	Double	Mule	C. H. & D.
Drift	Furnace	4	2 to 3	.....	Mule	C. H. & D.
Shaft, 118 ft.	Fan	4	2 to 4	Double	Mule	Hocking Valley.
Drift .....	.....	3	2 to 3	.....	Mule	H. V. R. R.
Drift	Furnace	4	2 to 4	.....	Mule	H. V. R. R.

MINING DISTRICT NO. 2.

The Second Mining District is comprised of the Counties of Athens, Gallia, Lawrence, Meigs and Washington, and D. H. Williams, Glouster, Ohio, is in charge.

The entire output of coal in this District for the year 1902 amounted to 4,224,708 tons. Two hundred and thirty-eight (238) visits were made in this district during the year 1902. The Modoc mine, owned by the Modoc Coal Co., Columbus, Ohio, was opened up in Athens County during the year, and will be operated on a large scale, equipped with electrical machinery, and will employ the triple entry system as a mode of ventilation. Cement mine, owned by the Ironton Portland Cement Company, Ironton, Ohio, and located in Lawrence County, was opened up during the year. This mine will be equipped with modern machinery and will be opened up on the double entry system.

The general condition of this District for the year was fair. In the Hocking and Sunday Creek Valley there was a great deal of lost time, owing to the scarcity of cars; in Meigs County, some time was lost on account of local strikes. The No. 6, 7 and 8 seams of coal are the most prominent coal seams found in this District in Athens County. The No. 8 seam is found in the hills. The No. 6 is found at a depth of from 75 to 350 feet. The No. 8 seam of coal is of good quality for steam and also for domestic purposes. The No. 7 seam of coal is used mostly for domestic purposes throughout the State. The No. 6 seam of coal is well adapted for domestic purposes, and is of good quality, the greater amount of this fuel being shipped to the lakes.

The scarcity of coal cars was a great drawback to the Hocking and Sunday Creek Valley during the year, the mines not working three-fourths time. All the large mines of this District have up-to-date mining machinery installed. In response to inquiries from the District Mine Inspectors as to whether all precautions are taken to protect life and property, Mr. Williams, in charge of this district, has the following to say: "Precautions are taken to protect life, but not property, as fires have occurred in some of the mines of this District." To prevent this I would suggest that in mines where gas is generated that it would be expedient to employ a competent person to visit the working places after the mine had ceased operation to see that no fires remain or left burning after shots have been fired.

The triple entry system of ventilation is in use in several of the large mines of this District, which produces a perfect system of ventilation, and for mine haulage where motors and rope are used for this purpose.

The coal found in Meigs County is the No. 8, and is of good quality. It is shipped mostly on the Ohio river and is found in the hills. The No. 5 seam is found in Lawrence County, is of fair quality, and is found in the hills. It is used to supply the domestic trade. Nine (9) Fatal Accidents were reported from this District during the year.

SECOND DISTRICT.

D. H. WILLIAMS, *Inspector*, Glouster, Ohio.

ATHENS COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent
Carbondale No. 2.....	Carbondale Coal Co., Carbondale, O.....	M. H. Doolittle, C dale, O.....
Carbondale No. 3.....	Carbondale Coal Co., Carbondale, O.....	M. H. Doolittle, C dale, O.....
No. 10.....	Sunday Creek Coal Co., Columbus, O.....	J. F. Roberts, Corna
Hiawatha or No. 10X.....	Sunday Creek Coal Co., Columbus, O.....	Edward Fluke, Joba
Belle Run or No. 55.....	Maple Hill Coal Co., Nelsonville, O.....	Joshua Spencer, I ville, O.....
No. 3 or Half Moon.....	Juniper & Barber, Nelsonville, O.....	Abner Juniper, Nels Ohio
New 29 or No. 109.....	I. Valkenburgh, Nelsonville, O.....	
West Floodwood.....	G. C. Silcot, Nelsonville, O.....	
No. 24.....	Northern Fuel Co., Jacksonville, O.....	
Broadwell.....	O. Brent Gard, Marietta, O.....	
Federal Valley No. 1.....	Twin Vein Coal Co., Broadwell, O.....	
Sedalia.....	Sedalia Coal Co., Glouster, O.....	
Big Run.....	Big Run Coal Co., Big Run, O.....	Thos. J. Leshon, B Ohio
Wells.....	A. H. Wells, Nelsonville, O.....	
Jobs No. 23.....	Psylvania Coal Co., Trimble, O.....	J. W. Blower, Trim
Phoenix No. 2 or No. 252.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Rends No. 4.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Rends No. 6.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
No. 16 or No. 266.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Jobs No. 17.....	Continental Coal Co., Columbus, O.....	
Oakdale or No. 311.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Pekin.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Elm Rock or No. 203.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Chauncey or No. 275.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Somers No. 1 or No. 204.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Floodwood or No. 201.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Kimberly No. 6.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glos
Black Diamond.....	Black Diamond Coal & Coke Co., Colum- bus, O.....	
Halbert.....	G. V. Shaffer & Son, Glen Ebon, O.....	
Daleton No. 1.....	Luhrig Coal Co., Luhrig, O.....	A. J. Laverty, Luhr
Daleton No. 2.....	Luhrig Coal Co., Luhrig, O.....	A. J. Laverty, Luhr
Brooks Hill.....	Hippel Coal Co., Coalton, O.....	W. D. Hippel, Coal
Doanville.....	C. & H. C., & I. Co., Columbus, O.....	E. B. Pedlow, New ville, O.....
McLeish.....	McLeish Coal Co., Columbus, O.....	Chas. W. Henry, Gl Ohio
Utley No. 2.....	Jennings Coal & Coke Co., Utley, O.....	C. W. Owings, Utley
Imperial No. 1.....	Imperial Coal Co., Nelsonville, O.....	Zeth Williams, Nels Ohio
Modoc.....	Congo Coal & Mining Co., Columbus, O.....	P. J. Harrigan, Con

GALLIA COUNTY.

Carl No. 1..... | E. L. Carl, Carlton, O..... | H. V. Carl, Carlton.

LAWRENCE COUNTY.

New Castle	Hanging Rock Iron Co., Hanging Rock, O.	D. B. Meacham, H Rock, O.....
Pine Grove Ore.....	Hanging Rock Iron Co., Hanging Rock, O.	C. M. Lawless, H Rock, O.....
Kelley	Kelley Nail & Iron Co., Ironton, O.....	
Lawrence Mill.....	Halley Coal Co., Pedro, O.....	David Halley, Pedro
Halley or Cobb.....	Halley & Wells, Pedro, O.....	David Halley, Pedro
Hall No. 1.....	Jno. F. Hall Coal Co., Dayton, O.....	
Nancy or Bartels.....	Peter Burke, Ort, O.....	

SECOND DISTRICT.

D. H. WILLIAMS, *Inspector*, Glouster, Ohio.

ATHENS COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Fan	6	4½	Double	Horse	B. & O. S. W.
Shaft	Fan	6	6	Double	Motor	T. & O. C.
Shaft	Fan	6	6	Double	Motor	Hocking Valley.
Drift	Fan	6	6	Double	Rope	T. & O. C.
Drift	Fire Basket.	6	6	Double	Horse	C. H. V. & T.
Drift	Natural	6	6	Double	Horse	C. H. V. & T.
Drift	Furnace	6	6	Double	Horse	C. H. V. & T.
Shaft	Fan	6	6	Double	Motor	T. & O. C.
Drift	Furnace	8	10	Double	Horse	T. & O. C.
Drift	Furnace	8	10	Double	Horse	T. & O. C.
Slope	Fan	7	4 to 8	Double	Rope	T. & O. C.
Slope	Fan	6	10	Single	Rope	T. & O. C.
Drift	Furnace	6	6	Double	Horse	C. H. V. & T.
Slope	Fan	6	6	Double	Horse and rope.	T. & O. C.
Shaft	Fan	6	6	Double	Motor	T. & O. C.
Shaft	Fan	6	6	Double	Rope	T. & O. C.
Shaft	Fan	6	6	Double	Motor	T. & O. C.
Shaft	Fan	6	6	Triple	Motor	C. H. V. & T.
Slope	Fan	6	6	Double and triple	Horse	T. & O. C.
Shaft	Fan	6	6	Double	Motor	T. & O. C.
Slope	Fan (2)	6	6	Double	Horse and rope.	C. H. V. & T.
Drift	Fan	6	6	Double	Motor	C. H. V. & T.
Shaft	Fan	6	6	Double	Motor	T. & O. C.
Drift	Fan	6	6	Double	Motor	C. H. V. & T.
.....	.....	.....	.....	.....	Motor .....	.....
.....	.....	.....	.....	.....	Horse .....	.....
Drift	Fan	8	10	Double	Motor	T. & O. C.
Drift	Furnace	6	6	Double	Horse	C. H. V. & T.
Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
Slope	Fan	6	4½	Double	Horse	B. & O. S. W.
Slope	Fan	6	6	Double	Rope	C. H. V. & T.
Shaft	Fan	6	6	Double	Horse	T. & O. C.
.....	.....	.....	.....	.....	Rope .....	.....
Slope	F. B.	6	6	Double	Motor	C. H. V. & T.
.....	.....	.....	.....	.....	Horse .....	.....
Drift	Furnace	8	5	Double	Horse	C. H. V. & T.
Drift	Natural	5	3	Single	Horse	N. & W.
Drift	Furnace	5	3	Single	Horse	N. & W.
Drift	Furnace	5	4	Single	Horse	N. & W.
Drift	Furnace	5	3	Single	Horse	N. & W.
Drift	Furnace	5	3	Single	Horse	C. H. & D.
Drift	Furnace	5	3	Single	Horse	C. H. & D.
Drift	Natural	5	3	Single	Horse	C. H. & D.

SECOND DISTRICT—Concluded.

LAWRENCE COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Cement	Ironton Portland Cement Co., Ironton, O.	.....
Belfont	Belfont Iron Works, Ironton, O.	.....
Belfont No. 3.....	Belfont Iron Works, Ironton, O.	.....

MEIGS COUNTY.

Peacock	Peacock Coal Co., Pomeroy, O.	M. Ebersbach, Pomeroy, O.
Peacock New, North.....	Peacock Coal Co., Pomeroy, O.	M. Ebersbach, Pomeroy, O.
Peacock East.....	Peacock Coal Co., Pomeroy, O.	M. Ebersbach, Pomeroy, O.
Charter Oak.....	Charter Oak Mining Co., Pomeroy, O.	B. J. Malone, Pomeroy, O.
Syracuse Shaft.....	Syracuse Coal & Salt Co., Syracuse, O.	L. H. Bridgeman, Syracuse, Ohio
Syracuse Slope.....	Syracuse Coal & Salt Co., Syracuse, O.	L. H. Bridgeman, Syracuse, Ohio
Rolling Mill No. 2.....	Martin Ebersbach, Pomeroy, O.	.....
Glendale	Russell & Co., Pomeroy, O.	.....
Buckeye Salt.....	Buckeye Salt Co., Pomeroy, O.	Chas. McQuigg, Pomeroy, O.
Rockville or Kings.....	Salisbury Coal Co., Columbus, O.	J. H. Lang, Middleport, O.
Noble Summit	Salisbury Coal Co., Columbus, O.	J. H. Lang, Middleport, O.
Silver Run	Wm. C. Russell, Middleport, O.	.....
Dabney	Kauf Bros., Middleport, O.	.....
Pittsburg	Pittsburg Coal Co., Pomeroy, O.	J. M. Woodward, Pomeroy, Ohio
Koehler	Benj. F. Koehler, Pomeroy, O.	.....
Coal Ridge.....	Coal Ridge Coal & Salt Co., Pomeroy, O.	J. W. Thomas, Pomeroy, O.
Lewis	Russell & Bear, Pomeroy, O.	Edw. Bear, Pomeroy, O.

SECOND DISTRICT—Concluded.

LAWRENCE COUNTY—Concluded.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Furnace	5	3	Single	Horse	C. H. & D.
Drift	Furnace	5	3	Single	Horse	C. H. & D.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Fan	8	5	Double	Locomotive	Ohio River R. R.
Drift	Fan	8	5	Double	Locomotive	Ohio River R. R.
Drift	Fan	8	5	Double	Horse	Ohio River R. R.
Shaft	Fan	8	5	Double	Horse	Ohio River R. R.
Slope	Fan	8	5	Double	Horse	Ohio River R. R.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Furnace	8	5	Double	Horse	K. & M.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Fan	8	5	Double	Motor	C. H. V. & T.
Drift	Furnace	8	5	Double	Horse	C. H. V. & T.
Slope	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.
Drift	Furnace	8	5	Double	Horse	Ohio River R. R.

THIRD MINING DISTRICT.

The Third Mining District is composed of the Counties of Muskingum, Morgan, Noble and Perry, and is under the supervision of D. B. Wilson, Corning, Ohio. The total amount of coal mined in this District amounted to 3,202,923 tons. Three hundred and twenty-two (322) visits were made to the mines of this District during the year 1902. The condition of the Coal Industry for the year in this locality was good, few strikes occurring, caused by technical points, and always settled within a few days by the officials of the Miners' Organization. In some sections of this District cars were very scarce; at Shawnee, Congo and all along the C., S. & H. R. R. the mines probably did not work half time. The cause given was lack of locomotives and cars to handle the coal.

In Muskingum County the veins that are being worked are the Nos. 5, 6 and 7. The No. 5 and 7 veins of coal are very deceptive, but as a general thing where found they run from 4 to 6 feet in thickness; they also vary in quality in different localities. At the Princess mine the coal is about 6 feet thick and is a good steam coal; fourteen miles south of the Princess mine is located the Blue Rock mine, where the coal is from 4 to 4½ feet in thickness, and is a fine domestic coal, but not adaptable for steam purposes. The No. 6 seam of coal appears to be uniform over a great part of this county. The general opinion prevails that the coal lands in this county are practically undeveloped. A great deal of coal land has been taken up within the past year. A large portion of the No. 6 seam of coal in the eastern part of this county lies below the surface. Coal was drilled for east of New Concord pierced the No. 6 seam of coal at 4 feet. The coal is said to be 4 feet in thickness. In the middle portion of this County the Nos. 5, 6 and 7 seams crop out, and in the western and northern part very little coal is found. The coal mined at Cannelville is largely used for steam and railroad use. The No. 7 seam of coal mined at the same place is used for domestic trade, and shipped to Columbus, O. On the Zanesville & Ohio R'y the No. 6 and No. 7 seam at Blue Rock is mostly used for the domestic trade, and shipped north and west. The quality of the coal, as a general thing, is good. In Morgan county but very little coal has been mined, although the coal land area is thought to be extensive. Two mines have been opened up in the northern part of the county and are located on the C., S. & H. R. R., where the No. 6 seam crops out, which is of good quality for either steam or domestic use. In the southern part of this County the No. 8 seam of coal crops out, where it is mined for the country trade.

In Perry County there is a great deal of undeveloped coal land, and a great amount of coal land was taken up in this county during the year

There has also been quite a large area of coal already mined out in this county. In the New Straitsville and Shawnee Districts the No. 6 seam coal is worked from drift mines, and in the Corning District is found at about 60 feet below the valley. This product generally goes to the lake and northwestern markets. The quality is good, either for domestic or steam use. The coal at Sayre Station is about 80 feet in depth, and in the northern direction crops out in the hills. The No. 5 seam of coal crops out at Redfield and is shipped both east and west, and also to the northwest. The coal is of fine quality. The Santoy mines penetrate the No. 6 seam of coal at a depth of 180 to 200 feet below the valley, four miles east of Corning. The following new mines opened up during the year will be operated to their full capacity and will install electrical machinery. The new Crescent No. 2 mine, owned by Phillips & Co., Cleveland; Pine Run, operated by Robert & Davis, Hemlock, Ohio; Santoy No. 1, owned by the New England Coal Co., Columbus, Ohio; also the Santoy No. 2 mine, owned by the same company; Northwest coal mine, owned by the Northwest Coal Co., Toledo, Ohio; Hamilton & Wallace Nos. 1 and 2 mines, owned by the Wallace Coal Co., Redfield, Ohio; Rends, owned by the Standard Hocking Coal Co., Columbus, Ohio. These mines are all located in Perry county. In Muskingum county the No. 10 mine, owned by the Muskingum Coal & R'y Co., Zanesville, although a pick mine, will be operated on an extensive scale.

The No. 8A seam of coal crops out in a large portion of Noble county, very little of it being mined. Quite a number of small mines are worked for country trade. North of Belle Valley the No. 7 seam of coal is penetrated at a depth of 180 feet, mostly used for steam purposes, and shipped mainly to the north. The coal lands in this County are practically undeveloped, but little coal being taken out and that by small mines. Five (5) fatal accidents occurred in this District for the year 1902.

ANNUAL REPORT

THIRD DISTRICT.

D. B. WILSON, *Inspector*, Corning, Ohio.

PERRY COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent
Rock Run No. 3.....	C. & H. C. & I. Co., Columbus, O.....	E. B. Pedlow, New ville O.
No. 8.....	Sunday Creek Coal Co., Columbus, O.....	John F. Roberts, C Ohio
No. 21.....	Sunday Creek Coal Co., Columbus, O.....	John F. Roberts, C Ohio
Hemlock	Buckeye Coal & R'y. Co., Columbus, O.....	John F. Roberts, C Ohio
No. 12 or Spring Valley..	Buckeye Coal & R'y. Co., Columbus, O.....	John F. Roberts, C Ohio
Buckeye No. 5.....	Buckeye Coal & R'y. Co., Columbus, O.....	Edward Fluke, New Ohio
No. 22 or No. 9.....	Buckeye Coal & R'y. Co., Columbus, O.....	John F. Roberts, C Ohio
Congo No. 1.....	Congo Mining Co., Columbus, O.....	P. J. Harrigan, Cos Ohio
Congo No. 2.....	Congo Mining Co., Columbus, O.....	P. J. Harrigan, Cos Ohio
Renda No. 3.....	Continental Coal Co., Columbus, O.....	David Thomas, Glo Ohio
No. 18.....	Continental Coal Co., Columbus, O.....	David Thomas, Glo Ohio
Upton No. 1.....	Upton Coal Co., Shawnee, O.....	.....
Upton No. 2.....	Upton Coal Co., Shawnee, O.....	.....
Beech Grove No. 6.....	Opperman Coal Co., Cambridge, O.....	Thomas Richards, F City, O.
XX	Thomas Williams & Son, Shawnee, O.....	Daniel Jenkins, S Ohio
Manley or Furnace No. 2.	E. W. Lewis & Co., Shawnee, O.....	.....
Shawnee Valley.....	Maynard Bros., Columbus, O.....	W. E. Williams, S Ohio
Lyonsdale	Maynard Bros., Columbus, O.....	.....
No. 37.....	Calvin Essex, New Straitsville, O.....	.....
Union No. 3.....	Saltillo Coal Co., Columbus, O.....	Chas. Hall
Bristol No. 1.....	Bristol Coal Co., Newark, O.....	G. A. Blood, Jr., ? Ohio
Briar Hill	Middle States Coal Co., Columbus, O.....	Jos. Grey, R. R. Crooksville, O.
Bearfield	Middle States Coal Co., Columbus, O.....	Jos. Grey, R. R. Crooksville, O.
Keystone No. 1.....	Zanesville Coal Co., Zanesville, O.....	Thos. Opie, Crooksv Ohio
Keystone No. 2.....	Zanesville Coal Co., Zanesville, O.....	N. W. Spencer, M Ohio
Lyonsdale, New.....	Wills Creek Coal Co., Detroit, Mich.....	Michael Meenan, Lye Ohio
Midway No. 1.....	Twentieth Century Coal Co., Columbus, O.....	William Griffith, B Ohio
Midway No. 2.....	Twentieth Century Coal Co., Columbus, O.....	William Griffith, B Ohio
Midway No. 3.....	Twentieth Century Coal Co., Columbus, O.....	William Griffith, B Ohio
Chestnut Ridge	A. P. Simons, Redfield, O.....	.....
Iron Point No. 3.....	David S. Richards, Shawnee, O.....	.....
Keystone No. 3.....	Orris Coal Co., Zanesville, O.....	H. N. Hawk, Rosevi Ohio
Block No. 2.....	Orris Coal Co., Zanesville, O.....	Lon Tague, McLune Ohio
Black Diamond No. 3.....	Taylor & Price, New Straitsville, O.....	J. H. Taylor, New ville, O.
No. 53.....	Ambrose Gibbs, New Straitsville, O.....	.....
Hamilton & Wallace.....	Hamilton & Wallace Coal Co., Redfield, O.....	Samuel Steele, R. R. New Lexington, O
Hamilton & Wallace No. 2	Hamilton & Wallace Coal Co., Redfield, O.....	.....
Santoy	New England Coal Co., Columbus, O.....	F. S. Knox, Columb Ohio
Pine Run.....	Roberts & Davis, Hemlock, O.....	Evan Roberts, Heml Ohio
Northwest	Northwest Coal Co., Toledo, O.....	John Hickman, Cor Ohio
New Crescent No. 2.....	New Crescent Mining Co., Roseville, O.....	H. H. Guy, Rosevill Ohio
XX No. 1.....	Jenkins & Redfern, Shawnee, O.....	Daniel Jenkins, S Ohio

THIRD DISTRICT.

D. B. WILSON, *Inspector*, Corning, Ohio.

PERRY COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
ift	Fan	6	9	Double	Tail rope	B. & O.
iaft, 60 ft.	Fan	6	12	Double	Tail rope&motor	T. & O. C.
ope	Fan	6	6ft.-101.	Double	Tail rope&motor	T. & O. C.
ope, 100 ft.	Fan	6	6	Double	Tail rope	C. S. & H.
ope, 120 ft.	Fan	6	7	Double	Rope & horses.	T. & O. C. *
ift	Fan	6	8	Single	Motor	C. H. V. & T.
ift	Fan	6	7	Double	Endless chain & motor	T. & O. C.
aft, 43 ft.	Fan	6	12	Double	Motor	C. S. & H.
aft, 53 ft.	Fan	6	13	Double	Motor	C. S. & H.
aft, 40 ft.	Fan	6	15	Double	T. R. & motor..	T. & O. C.
ope, 200 ft.	Two fans ..	6	12	Double	End. chain and motor	T. & O. C.
ift	Furnace	6	9	Double	Motor	B. & O. & C. S. & H.
ift	Fan	6	8	Double	Motor	B. & O. & C. S. & H.
ift	Furnace	6	3½	Double	Motor	C. & M. V.
ift	Fan	6	8	Pillars	Tail rope	C. S. & H. & B. & O.
ift	F. B.	6	8	Pillars	Horses	C. S. & H. & B. & O.
ift	Furnace	6	8	Pillars	End. rope	C. S. & H. & B. & O.
ift	Furnace	6	10	Pillars	Small loco'tive	C. S. & H. & B. & O.
ift	Furnace	6	10	Double	Motor	C. H. V. & T.
ift	Furnace	6	3½	Double	Mule	C. & M. V.
ift	Fan	6	3	Double	Tail rope	B. & O.
ope, 150 ft.	Furnace	6	3-8	Double	Rope & mules..	C. S. & H.
ift	Fan	6	2-8	Double	Mules	
ift	Furnace	6	3½	Double	Motor	C. & M. V.
ift	Furnace	6	3½	Double	Motor	C. & M. V.
ift	Furnace	6	3½	Double	Mule	C. S. & H.
ift	Furnace	5	4½	Double	Mule	C. S. & H.
ift	Furnace	5	4½	Double	Mule	C. S. & H.
ift	Ex. S.	5	3½	Single	Mule	C. S. & H.
ift	F. B.	6	5½	Double	Mule	B. & O.
ift	Furnace	6	3½	Double	Mule	C. & M. V.
ift	Furnace	6	3½	Double	Mule	C. & M. V.
ft	Furnace	6	8	Single	Horse	B. & O.
ft	Natural	6	12	Single	Horse	B. & O.
ft	F. B.	6	3-8	Double	Horse	C. S. & H.
ft	F. B.	6	3-8	Double	Horse	C. S. & H.
ft	Fan	6	3½	Double	Mule	C. S. & H.
ft	Fan	6	5	Double	Mule	C. S. & H.
ft	Ex. Steam ..	6	8	Double	Horse	K. & M.
ft	Furnace	6	4	Double	Mule	C. & M. V.
ft	Natural	6	10	Pillars	Mule	C. S. & H.

THIRD DISTRICT—Concluded.

MUSKINGUM COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Princess	McCoy Coal Co., Zanesville, O.....	Perry Smith, Zanesville
Granger	Siler Coal Co., McConnelsville, O.....	Frank Siler, McConnelsville, O.
Blue Rock	Blue Rock Coal Co., Cedar Run, O.....	E. J. Souder, Philo, O.
Weller	W. H. Weller, Zanesville, O.....	W. H. Weller
Edward No. 2.....	Maynard Bros., Columbus, O.....	Bruce Mauk, Dillon, O.
Peacock No. 38.....	Maynard Bros., Columbus, O.....	Bruce Mauk, Dillon, O.
Walnut Hill No. 2.....	W. H. Blaney, Dillon, O.....	J. R. Griener, Zanesville, Ohio
Oak Knob.....	Oak Knob Coal Co., Zanesville,	A. B. Mullen, Zanesville
Diamond No. 3.....	C. W. Joslin & Co., Zanesville, O.....	L. D. Abel, Zanesville
No. 10.....	Muskingum Coal & R'y. Co., Zanesville, O.	Joseph Griffith, Dillon
Cannelville	Hamilton & Griffith, Columbus, O.....	George L. Porter, Coshocton, Ohio
Porters	Porter Bros., Coaldale, O.....	

MORGAN COUNTY.

Rose	Carding Coal Co., Rose Farm, O.....	John Carding, Rose Farm, O.
Rose Valley.....	Tropic Mining Co., Rose Farm, O.....	T. E. Underwood, Rose Farm, O.

THIRD DISTRICT—Concluded.

MUSKINGUM COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Fire B.	7	6	Double	Mule	O. & L. K.
Drift	Furnace	6	3-8	Double	Mule	O. & L. K.
Drift	Furnace	7	4	Double	Mule	O. & L. K.
Drift	Fire B.	6	3	Single	Mule	C. S. & H.
Drift	Furnace	6	3-8	Double	Mule	C. S. & H.
Drift	Furnace	6	3-8	Double	Mule	C. S. & H.
Drift	Fire B.	6	3	Double	Ponies	O. & L. K.
Drift	Furnace	7	6	Double	Mule	B. Z. & C.
Drift	Furnace	6	3½	Double	Mule	C. S. & H.
Drift	F. B.	5	6	Single	Mule	
Drift	Furnace	6	3½	Double	Ponies	C. S. & H.
Slope	Furnace	6	3-8	Double	Rope and ponies	C. S. & H.

FOURTH MINING DISTRICT.

The Counties of Monroe, Belmont, Harrison and Jefferson compose the Fourth Mining District, and is Superintended by District Mine Inspector Thomas McGough, Bridgeport, Ohio. A number of new mines have been opened up during the year which will install electrical machinery, and worked on an extensive scale. The total output of this District was 4,141,491 tons. The condition of the Coal Industry for the year was fair, a few local strikes occurring but none of a serious nature.

The coal lands of Belmont County are well developed where the Number 8 seam is penetrated and varies from 4 and one-half to 5 and one-half feet in thickness. In Jefferson County the Number 5, 6, 7 and 8 seams of coal are found, with the Number 8 more in evidence than any of the others, the drift being used principally as a mode of development. The Number 6 seam of coal is only worked in three places at Steubenville, where it is found at a depth of from 150 to 285 feet. The coal lands of Jefferson and Harrison Counties are nearly all taken up. The coal is used principally for steam purposes. The price of coal at the mines was \$1.25 and \$1.50 for steam lump. The scarcity of cars was the cause of the mines working only about three-fourth time. One hundred and eighty-seven (187) visits were made in this District during the year. Eighteen (18) fatal accidents occurred in this District during the fiscal year.

FOURTH DISTRICT.

THOMAS MCCOUGH, *Inspector*, Bridgeport, Ohio.

BELMONT COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Wheeling Creek No. 1....	Lorain Coal & Dock Co., Cleveland, O.....	J. E. Waters, Bridgeport, Ohio
Wheeling Creek No. 2....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, Ohio
Crescent No. 2.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, Ohio
Crescent No. 3.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, Ohio
Crescent No. 4.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, Ohio
Aetna Standard.....	United States Steel Co., Bridgeport, O.....	Roger Ashton, Martins Ferry, O.
Nail Mill.....	National Steel Co., Bellaire, O.....	Joseph Donley, Bellaire, O.
Schicks.....	M. J. Schick & Co., Bellaire, O.....	.....
Belmont No. 1.....	Long Bros., Bellaire, O.....	.....
Empire No. 1.....	Empire Coal Co., Bellaire, O.....	E. H. Weltzel, Bellaire, O.
Empire No. 2.....	Empire Coal Co., Bellaire, O.....	E. H. Weltzel, Bellaire, O.
Empire No. 6.....	Empire Coal Co., Bellaire, O.....	Reuben Street, Bellaire, O.
Morgan.....	Bellaire Coal & Coke Co., Bellaire, O.....	.....
Maple Hill.....	Youghlougheny-Ohio Coal Co., Barton, O.....	T. W. Jones, Barton, O.
Maple Hill No. 2.....	Youghlougheny-Ohio Coal Co., Barton, O.....	T. W. Jones, Barton, O.
Boggs No. 2.....	E. N. Boggs, Barton, O.....	John Baugh, St. Clair, Ohio
Taggart.....	Barton Coal Co., Barton, O.....	J. L. Selway, Barton, Ohio
Flushing.....	Flushing Coal Co., Flushing, O.....	W. G. Williams, Flushing, Ohio
Black Diamond.....	Belmont Coal Co., Glencoe, O.....	Thos. K. Maher, Glencoe, Ohio
O. & W. Va.....	Belmont Coal Co., Glencoe, O.....	Thos. K. Maher, Glencoe, Ohio
Glen.....	Belmont Coal Co., Glencoe, O.....	Thos. K. Maher, Glencoe, Ohio
Captina.....	Captina Coal Co., Armstrong's Mills, O.....	Wm. Rankin, Armstrong's Mills, O.
Franklin.....	Hart Coal Co., Stewartsville, O.....	E. P. Wise, Stewartsville, Ohio
Wegee.....	Hart Coal Co., Stewartsville, O.....	.....
Laughlin.....	Laughlin Nail Co., Wheeling, W. Va.....	W. L. Glessner, Martins Ferry, O.
Gaylord.....	Gaylord Mining Co., Martins Ferry, O.....	.....
Pipe Creek.....	Johnson Bros. Coal Co., Dillies Bottom, O.....	.....
Kennon No. 2.....	Kennon Coal Co., Cleveland, O.....	F. P. Corey, Flushing, Ohio
Tin Plate.....	American Tin Plate Co., Martins Ferry, O.....	Click Robinson, Martins Ferry, O.
Buckeye.....	Buckeye Coal & Mining Co., Flushing, O.....	.....
Pultney.....	Pultney Coal Co., Bellaire, O.....	.....
Weaver.....	Weaver Coal Co., Chicago, Ills.....	Wm. Bowland, Glencoe, Ohio

HARRISON COUNTY.

Clover Leaf.....	Cuyahoga Coal Co., Cleveland, O.....	.....
Tippecanoe.....	Tippecanoe Coal Co., Cleveland, O.....	George Selway, Tippecanoe, Ohio
Robyville.....	Roby Coal Co., Cleveland, O.....	J. J. Roby, Adena, O.

JEFFERSON COUNTY.

Dillon No. 2.....	W. & L. E. Coal Mining Co., Dillonvale, O.....	Fred Hornickel, Dillonvale, Ohio
Long Run No. 1.....	W. & L. E. Coal Mining Co., Dillonvale, O.....	Fred Hornickel, Dillonvale, Ohio
Connor No. 1.....	W. & L. E. Coal Mining Co., Dillonvale, O.....	Fred Hornickel, Dillonvale, Ohio
Connor No. 2.....	W. & L. E. Coal Mining Co., Dillonvale, O.....	Fred Hornickel, Dillonvale, Ohio
Forest City.....	American Sewer Pipe Co., Toronto, O.....	W. B. Francy, Toronto, O.

FOURTH DISTRICT.

THOMAS MCCOUGH, *Inspector*, Bridgeport, Ohio.

BELMONT COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Furnace	8	5½	Double	Tail rope&mules.	C. L. & W.
Drift	Fan	8	5½	Double	Elec. and mules.	C. L. & W.
Drift	Fan	8	5½	Double	Elec. and mules.	C. L. & W.
Drift	Fan	8	5½	Double	Elec. and mules.	C. L. & W.
Drift	Fan	8	5½	Double	Elec. and mules.	C. L. & W.
Drift	Furnace	8	5½	Double	Mule	C. & P.
Drift	Furnace	8	5½	Double	Elec. and mule..	C. & P.
Drift	Fan	8	5½	Double	Mule	B. & O.
Drift	Furnace	8	5½	Double	Mule	B. Z. & C.
Drift	Furnace	8	5½	Double	Rope. elec. and mule	C. & P.
Drift	Fan	8	5½	Double	Elec. and mules.	C. & P.
Drift	Furnace	8	5½	Double	Elec. and mules.	B. & O.
Drift	Furnace	8	5½	Double	Mules	C. & P.
Drift	Fan	8	5½	Double	Electric	C. L. & W.
.....	.....	8	.....	Double	Mule .....	.....
Drift	Furnace	8	5½	Double	Mule	C. L. & W.
Drift	Furnace	8	5½	Double	Mule	C. L. & W.
Drift	Fan	8	4	Double	Mule and elec..	C. L. & W.
Drift	Fan	8	5½	Double	Rope and mule.	B. & O.
Drift	Furnace	8	5½	Double	Mule	B. & O.
Slope, 30 ft.	Fan	8	5½	Double	Mule and rope..	B. & O.
Shaft, 65 ft.	Fan	8	6	Double	Mule	B. Z. & C.
.....	.....	8	.....	Double	Elec. and mule..	.....
Slope, 150 ft.	Furnace	8	5½	Double	Rope and mule.	Ohio River.
Drift	Fan	8	5½	Double	Rope and mule.	.....
Drift	Furnace	8	5½	Double	Elec. and mule..	C. & P.
Slope, 150 ft.	Fan	8	6	Double	Rope and mule.	C. L. & W.
Drift	Fan	8	4½	Double	Elec. and mule..	C. L. & W.
Drift	Fan	8	5½	Double	Elec. and mule..	.....
Drift	Furnace	8	4½	Double	Mule	C. L. & W.
Slope, 140 ft.	Fan	8	5½	Double	Mule and rope..	C. & P.
Shaft, 65 ft.	.....	.....	.....	.....	.....	.....
Drift	Furnace	6	3½	Double	Mule	P. C. C. & St. L.
Drift	Furnace	7	6	Double	Elec. and mule..	C. L. & W.
Drift	Fan	8	5½	Double	Electric	W. & L. E.
Drift	Fan	8	5½	Double	Elec. and mule..	W. & L. E.
Drift	Fan	8	5½	Double	Elec. and mule..	W. & L. E.
Drift	Fan	8	2½	Double	Elec. and mule..	W. & L. E.
Drift	Furnace	5	3	Double	Mule	C. & P.

FOURTH DISTRICT—Concluded.

JEFFERSON COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Calumet Coal	American Sewer Pipe Co., Toronto, O.....	Samuel McAdoo, Calu Ohio
High Shaft	Steubenville Coal & Mining Co., Steuben-ville, O.....	Wm. Smurthwalte, s benville, O.....
Glen Run No. 1.....	Glen Run Coal Co., Cleveland, O.....	Thomas Thomas, Dil vale, O.....
Glen Run No. 2.....	Glen Run Coal Co., Cleveland, O.....	Thomas Thomas, Dil vale, O.....
Kelley No. 2.....	Lewis Coal & Coke Co., Portland Station, O	E. J. Lewis, Portland i Ohio
McFayden	Wayne Coal Co., Pittsburg, Pa.....	D. G. Wise, Carmen, C
Walnut Hill	O. & P. Coal Co., Cleveland, O.....	John Nixen, Yorkville,
LaBelle	LaBelle Iron Works, Steubenville, O.....	W. H. Ewing, Steuben Ohio
Brilliant	George A. Laughlin, Wheeling, W. Va.....	.....
Diamond No. 4.....	W. E. Smith, Wellsville, O.....	.....
Taylor	W. A. Taylor & Son, Bergholz, O.....	Wm. Taylor, Bergholz,
Rush Run	Tener & Byron, Rush Run, O.....	W. A. Byron, Rush Run
Russell	Russell Coal Co., Tiltonville, O.....	George McKitterick, s benville, O.....
Zerby	O. & P. Coal Co., Cleveland, O.....	.....
Jefferson No. 1.....	Jefferson Coal Co., Cleveland, O.....	John Simpson, Piney F Ohio
Jefferson No. 2.....	Jefferson Coal Co., Cleveland, O.....	.....
United States No. 8.....	United States Coal Co., Dillonvale, O.....	Edwin Robinson, Dil vale, O.....
United States No. 9.....	United States Coal Co., Dillonvale, O.....	Edwin Robinson, Dil vale, O.....
Hickman & Upstill	Upstill Coal Co., Cleveland, O.....	.....
Great Western	American Sewer Pipe Co., Toronto, O.....	W. B. Francy, Toronto



FIFTH MINING DISTRICT.

Coshocton, Guernsey and Tuscarawas Counties comprise the Fifth Mining District, of which W. H. Turner, Cambridge, Ohio, is in charge. The total amount of coal produced in this District was 4,956,051 tons.

The general condition of the Coal Industry for the year was excellent. A few local suspensions occurred pending grievances which were soon adjusted by the prompt action of the officials of the United Mine Workers. The selling price of coal at the mines was from 80 cents to \$1.00 per ton, run of mine. While the absence of cars caused some idleness, there did not appear to be an unusual scarcity. The mines of the District were in operation about three-fourths time.

In Coshocton County, the upland is all underlain with coal, and present developments are principally confined to Tuscarawas, Virginia, Jackson and La Fayette Townships. The most of the undeveloped coal lands of this County are taken up, 8,000 acres being the estimate of what has already been undermined. The number 6 seam of coal in this County is reached wholly by drifts, of good quality and adapted for handling and long shipments. Principle markets are Columbus and Cleveland.

Guernsey County is all underlain with coal levels. Present developments are confined to Cambridge, Jackson, Center, Richland, Spencer and Knox Townships, with the principle undeveloped coal lands taken up. The estimated amount of acreage already mined out is given at 10,000 acres. The Number 7 seam of coal is penetrated at a depth ranging from drift mines to shafts at 176 feet deep, making an average depth of about 90 feet south and east of Cambridge. The Number 6 seam of coal lies north and west of Cambridge, and can be penetrated throughout the territory by drifting. The quality of both seams of coal is excellent. The principle market is northwest, and the coal adaptable for any use.

The development of coal in Tuscarawas County is confined to Sandy, Goshen, Mill and Union Townships, with the undeveloped coal lands all virtually taken up. The approximate estimation of coal already undermined is given at 10,000 acres. The coal land that has already been developed lies principally above water level. The Number 5 and 6 seams are both worked in Sandy Township through drifting. The coal in the southeastern portion of this County is reached at a depth of 90 feet. Cleveland and Lorain are the principle market for this coal, which is of excellent quality best adapted for long shipments and handling. Ten (10) fatal accidents were reported as occurring in this district for the year 1902.

ANNUAL REPORT

FIFTH DISTRICT.

WM. H. TURNER, *Inspector*, Cambridge, Ohio.

COSHOCTON COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Conesville No. 4.....	David Davis, Conesville, O.....	.....
Conesville No. 5.....	David Davis, Conesville, O.....	.....
Hay No. 2.....	Drake Coal Co., Cleveland, O.....	.....
Cassingham.....	Coshocton Coal Co., Coshocton, O.....	G. W. Cassingham, Coshocton, O.
Cassingham No. 2.....	G. W. Cassingham Coal Co., Coshocton, O.....	.....
Franklin No. 1.....	Columbus Coal Mining Co., Columbus, O.....	F. N. Barnes, Franklin, Ohio
Best	Best Coal Co., Franklin Station, O.....	C. C. Hudson, Coshocton, Ohio
Wade No. 2.....	Wade Coal Co., Cleveland, O.....	H. D. Dennis, Cleveland, Ohio
Wade No. 3.....	Wade Coal Co., Cleveland, O.....	H. D. Dennis, Cleveland, Ohio
Conley No. 2.....	Wade Coal Co., Cleveland, O.....	H. D. Dennis, Cleveland, Ohio
Conley No. 1.....	Williams & Son, Coshocton, O.....	Thomas Williams, Coshocton, O.
Morgan Run No. 3.....	Morgan Run Coal Co., Cleveland, O.....	L. B. Piper, Coshocton, Ohio
Arnold	Arnold Coal Co., Columbus, O.....	J. H. Moorefield, Coshocton, Ohio

GUERNSEY COUNTY.

Detroit	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, Byesville, Ohio
Farmer's	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, Byesville, Ohio
Walhounding	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, Byesville, Ohio
Ideal	Wills Creek Coal Co., Detroit, Mich.....	W. H. Davis, Byesville, Ohio
Trail Run	J. W. Ellsworth, Cleveland, O.....	Dennis Conroy, Byesville, Ohio
Hartford	J. W. Ellsworth, Cleveland, O.....	H. E. Cameron, Buffalo, Ohio
Guernsey	Ohio & Northwestern Coal Mining Co., Cambridge, O.....	E. L. Donnelly, Cambridge, Ohio
Cisco	Opperman Coal Co., Cambridge, O.....	Thos. E. Richards, Danford, Ohio
Robbins or King's.....	Morris & Guild Coal Co., Cambridge, O.....	J. C. Kyte, Guild, Ohio
Old Orchard	Morris & Guild Coal Co., Cambridge, O.....	Wm. Thompson, Danford, Ohio
Forsythe	Forsythe Coal Co., Danford, O.....	Homer Forsythe, Danford, Ohio
Nicholson	Ohio Coal Co., Cambridge, O.....	.....
Klondike	Loomis, Moss & Co., Lore City, O.....	Henry Moss, Kipling, Ohio
Imperial	Imperial Mining Co., Cambridge, O.....	.....
Little Kate	National Coal Co., Akron, O.....	W. A. Lucas, Byesville, Ohio
Black Top	J. H. Somers & Co., Cleveland, O.....	.....
Indian Camp	Indian Camp Coal Co., Coshocton, O.....	James Glen, Coshocton, Ohio
Pioneer No. 2.....	Byesville Fuel Co., Byesville, O.....	Benj. Morris, Byesville, Ohio
Murray Hill	Akron Coal Co., Akron, O.....	Wm. Rigby, Kipling, Ohio
Guernsey Brick	Guernsey Brick & Construction Co., Cambridge, O.....	Ira Pence, Byesville, Ohio

BELMONT COUNTY.

Cochran	Wm. A. Werner, Zanesville, O.....
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NOBLE COUNTY.

Laura	Eastern Ohio Coal Co., Cleveland, O.....	R. T. Price, Cleveland, Ohio
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TUSCARAWAS COUNTY.

Somerdale West	Somerdale Coal Co., Somerdale, O.....
Somerdale No. 2.....	Somerdale Coal Co., Somerdale, O.....	D. R. Jones, Somerdale, Ohio
Midvale No. 2.....	Midvale Goshen Coal Co., Cleveland, O.....	Frank McIntosh, New Adelphia, O.

INSPECTOR OF MINES.

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FIFTH DISTRICT.

WM. H. TURNER, *Inspector*, Cambridge, Ohio.

COSHOCTON COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Furnace	6	3-10	Single	Rope	P. C. C. & St. L.
Drift	Furnace	6	3-10	Single	Mule	P. C. C. & St. L.
Drift	Furnace	6	3½	Double	Motor	W. & L. E.
Drift	Furnace	6	4	Single	Motor	W. & L. E.
Drift	Furnace	6	4	Single	Mule	P. C. C. & St. L.
Drift	Furnace	6	3½	Double	Mule	W. & L. E.
Drift	Furnace	6	3½	Single	Mule	W. & L. E.
Drift	Furnace	6	3-10	Single	Mule	W. & L. E.
Drift	Furnace	6	4	Double	Motor	W. & L. E.
Drift	Fan	6	3-10	Double	Motor	W. & L. E.
Shaft, 176 ft.	Fan	7	6½	Double	Mule	C. & M.
Shaft, 58 ft.	Fan	7	5½	Double	Rope	C. & M.
Shaft, 95 ft.	Fan	7	5½	Double	Rope and motor.	C. & M.
Shaft, 75 ft.	Fan	7	5½	Double	Motor	C. & M.
Shaft, 72 ft.	Fan	7	5½	Double	Rope	C. & M.
Shaft, 82 ft.	Fan	7	6	Double	Motor	B. & O.
Drift	Furnace	7	5½	Double	Motor	B. & O.
Shaft, 72 ft.	Fan	7	5½	Double	Motor	C. & M.
Shaft, 73 ft.	Fan	7	5½	Double	Motor	B. & O.
Shaft, 38 ft.	Fan	7	5½	Double	Motor	B. & O.
Slope, 105 ft.	Fan	7	5½	Double	Motor	B. & O.
Drift	Furnace	7	6	Double	Rope	C. & M.
Slope, 112 ft.	Fan	7	5½	Double	Rope	B. & O.
Slope, 120 ft.	Fan	7	6	Double	Rope	C. & M.
Slope, 98 ft.	Fan	7	6	Double	Mule	C. & M.
Slope, 90 ft.	Fan	7	6	Double	Rope	B. & O.
Drift	Natural	6	4½	Double	Mule	C. & M.
Slope, 98 ft.	Ex. steam ..	7	6	Double	Mule	C. & M.
Slope, 160 ft.	Fan	7	5½	Double	Mule	B. & O.
Drift	Natural	7	4	Double .....	.....	C. & M.
Drift	Furnace	8	4	Double	Mule	B. & O.
Shaft	Fan	7	5½	Double .....	.....	C. & M.
Drift	Furnace	6	3½	Single	Mule	W. & L. E.
Drift	Furnace	6	3½	Double	Rope	W. & L. E.
Drift	Furnace	6	4	Double	Rope	C. L. & W.

FIFTH DISTRICT—Concluded.

TUSCARAWAS COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Midvale No. 4.....	Midvale Goshen Coal Co., Cleveland, O.....	Frank McIntosh, New Philadelphia, O.....
Midvale No. 5.....	Midvale Goshen Coal Co., Cleveland, O.....	Frank McIntosh, New Philadelphia, O.....
Acme	George Markley, Mineral City, O.....	E. L. Jones, Mineral City, Ohio
Buckhorn	George Markley, Mineral City, O.....	E. L. Jones, Mineral City, Ohio
East Goshen No. 1.....	East Goshen Coal Co., Cleveland, O.....	Wm. Empfield, New Philadelphia, O.....
East Goshen No. 2.....	East Goshen Coal Co., Cleveland, O.....	Wm. Empfield, New Philadelphia, O.....
Goshen No. 2.....	Goshen Coal Co., New Philadelphia, O.....	.....
Huff's Run	Ridgway, Burton & Co., Cleveland, O.....	.....
Huff's Run No. 2.....	Ridgway, Burton & Co., Cleveland, O.....	.....
Long Meadow	Ridgway, Burton & Co., Cleveland, O.....	.....
South Side	C. E. Holden, Mineral City, O.....	.....
Twin City	Dennison Coal Co., Dennison, O.....	Joseph Ramage, Dennison, Ohio
Houk	American Sheet Steel Co., Canal Dover, O.....	J. L. Houk, Stillwater, Ohio
Dennison	American Sheet Steel Co., Canal Dover, O.....	J. L. Houk, Stillwater, Ohio
Massillon Peacock	E. Van Kirk, Mineral City, O.....	.....
Maple Grove	Schindler Bros., Tuscarawas, O.....	H. A. Schindler, Tuscarawas, O.....
Laughlin	Mineral City Coal Co., Mineral City, O.....	T. E. Wilson, Mineral City, Ohio
Erhard	Carbon Hill Coal Co., Toledo, O.....	.....
Shanesville	Drake Coal Co., Shanesville, O.....	C. L. Cassingham, Shanesville, O.....
Morey Ridge	C. J. Nungesser, Beldier, O.....	.....
Indian Hill	Hiawatha Coal Co., Uhrichsville, O.....	.....
New Castle	New Castle Coal Co., New Philadelphia, O.....	J. S. Kollar, New Philadelphia, O.....
West Goshen	Cleveland & Tuscarawas Coal Co., Cleveland, O.....	Chas. Cassingham, Cleveland, O.....
Royal Coal	Royal Goshen Coal Co., Midvale, O.....	H. E. Cole, Midvale, O.....
Royal Clay No. 1.....	Royal Sewer Pipe & F. B. Co., New Philadelphia, O.....	.....
Novelty	Novelty Brick Co., Newcomerstown, O.....	Andrew Robinson, Newcomerstown, O.....
Beaver Dam No. 1.....	Beaver Dam Coal Co., Cleveland, O.....	R. Shoemaker, Newcomerstown, O.....
Center Valley	Massillon-Tuscarawas Coal Co., Massillon, Ohio	O. L. Chalker, Vick, Ohio
Goshen Central	Goshen Central Coal Co., Massillon, O.....	R. W. Johns, Massillon, Ohio
		W. K. Moore, New Philadelphia, O.....

FIFTH DISTRICT—Concluded.

TUSCARAWAS COUNTY—Concluded.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Furnace	6	3½	Double	Rope	C. L. & W.
Slope	Fan	6	3½	Double	Mule	C. L. & W.
Drift	Furnace	6	3½	Single	Mule	Valley R. R.
Drift	Furnace	6	3½	Double	Mule	C. & M.
Drift	Furnace	6	4	Double	Rope	C. & P.
Slope, 120 ft.	Fan	6	4	Double	Motor	C. & P.
Slope	Furnace	6	4	Double	Rope	C. L. & W.
Drift	Fan	6	4	Double	Rope	Valley R. R.
Drift	Furnace	6	3½	Double	Mule	W. & L. E.
Drift	Furnace	6	3½	Double	Mule	W. & L. E.
Drift	Furnace	6	3½	Single	Mule	Valley R. R.
Drift	Furnace	6	3½	Double	Mule	P. C. C. & St. L.
Drift	Furnace	7	6	Double	Motor	C. L. & W.
Drift	Furnace	6	3½	Single	Rope	C. L. & W.
Drift	Furnace	6	3½	Double	Rope	Valley R. R.
Drift	Furnace	6	3½	Single	Mule	P. C. C. & St. L.
Drift	Furnace	6	3½	Double	Mule	C. & P.
Drift	Furnace	6	3	Single	Mule	C. L. & W.
Slope, 125 ft.	Furnace	6	3½	Double	Rope	W. & L. E.
Drift	Furnace	6	4	Double	Rope	W. & L. E.
Drift	Fan	6	3½	Double	Rope	P. C. C. & St. L.
Drift	Furnace	6	3½	Double	Mule	Canal route.
Drift	Furnace	6	4	Double	Rope	C. & M.
.....	.....	.....	.....	.....	Mule .....	.....
.....	.....	.....	.....	.....	Mule .....	.....
.....	.....	.....	.....	.....	Mule .....	.....
Shaft, 69 ft.	Fan	6	4	Double	Mule .....	.....
Drift	Fan	6	4	Double	Mule	W. & L. E.
Drift	Fan	6	4	Double	Mule	C. & P.

SIXTH MINING DISTRICT.

The Sixth Mining District is composed of the Counties of Carroll, Columbiana, Mahoning, Trumbull and Portage. The Inspector for this District is James P. Davis, Salem, Ohio. The total output of coal mined in this District was 1,460,855 tons. Two hundred and thirty-two (232) visits were made in the District during the year 1902. The general condition of the Coal Mining District during the year was good, better than it was ever known before. The mines, as a rule, worked almost full time. No strikes of any consequence occurred.

The first large mine in Carroll County was opened up in the year 1879, to the Number 7 seam of coal. The coal varied in thickness from 4 to 6 feet. This, in many instances, was cut out by horsebacks. At the present time this seam is practically worked out. The Number 6 seam of coal lies 120 feet below the Number 7 seam, and is generally found to be about 4 feet in thickness, and appears to be uniform throughout the county. A very small proportion of this has been mined out, but a great deal of the undeveloped territory is being taken up.

Coal has been mined in Columbiana County for the past sixty years at least. The Number 3, 4 and 7 seams are being mined at the present time; also a vein known as the "Strip Vein." The Number 3 seam is usually found to be about 3 feet thick and of good quality. A very small portion of this vein, compared with the undeveloped territory, is being worked. The Number 4 seam of coal is 50 feet above the Number 3, and is found to be from 3½ to 4 feet thick. The quality of this coal is not considered as valuable as the Number 3. A very small portion of this territory has been mined out, compared with the undeveloped portion. The Number 7 seam of coal is found along the main line of the C. & P. Railroad, from the mouth of the Yellow Creek west to Summitville. The coal is found to be from 5 to 6½ feet thick. This coal has been mined out in Washington Township, in this county. Possibly one-half of the territory in the vicinity of Salineville is free from faults. As you travel east the coal is found to be faulty and contains more sulphur. A great deal of this territory lying near the railroads has been taken up.

In Mahoning County the Number 3 and 4 seams of coal are worked. The quality of the coal is good and finds a ready market. Coal has been mined in this County for a number of years, and there are still thousands of acres untouched. A great deal of this territory has been taken up during the last six months on account of the proposed electric road via Salem, Lisbon, Wellsville and East Liverpool. This proposed line goes through an extensive coal territory between Lisbon and Wellsville.

In Portage County is found the Number 1, or Massillon seam of coal, which is counted the best grade of coal that goes to the market. It is found at a depth of from 175 to 235 feet, and is $3\frac{1}{2}$ feet in thickness. A very small proportion of this coal has been mined, but a great amount of the undeveloped territory is being taken up.

The quality of the coal is first-class, and is best adapted for domestic purposes, and finds a ready market anywhere.

(Jefferson County, Springfield Township.)

The seam of coal found here is called the Number 6A, and is from 5 to 6 and one-half feet in thickness. It is found at a depth of from 75 to 300 feet going south from Bergholz. This is the only 6A seam of coal reported as being worked in the State, and from all accounts is the finest seam of coal in Ohio. The territory in this Township is practically taken up.

The quality of this coal is good, and is used for either domestic or steam purposes. The coal is nearly all shipped to Cleveland.

In Carroll County the Number 7 seam of coal is mined by drift, and is nearly all lying tipple height. The Number 6 seam of coal is mined at a depth of from 120 to 140 feet below the Number 7. The principal market for this coal is the Lakes, and is best adapted for steam purposes.

In Columbiana County the Number 7 seam of coal is found along the main line of the C. & P. Railroad, near Salineville, Ohio, at a depth of about 40 feet. The next mine on this line lies at a depth of 30 feet. The Number 4 seam of coal lies at a depth of from 75 to 150 feet. The Number 3 seam is from 100 to 225 feet in depth. The quality of this coal is good, and it is best adapted for steam purposes. It finds a market at the Lakes. The Number 3 seam is also used for domestic purposes. Eight (8) fatal accidents were reported from this District for the year 1902.

ANNUAL REPORT

SIXTH DISTRICT.

JAS. P. DAVIS, *Inspector*, Salem, Ohio.

CARROLL COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. of Superintendent.
Linden No. 6.....	Davis Railway Coal Co., Canton, O.....	J. J. Evans, Linden, Ohio
Malvern Coal	Malvern Fire Clay Co., Malvern, O.....	John Fisher, Malvern, Ohio
Magnolia	Magnolia Coal Co., Magnolia, O.....	J. J. Dagenhard, Magnolia, Ohio
Davis No. 6.....	Sherrodsdale Coal Co., Cleveland, O.....	Herman Kessler, Cleveland, Ohio
Beatty No. 2	National Fire Roofing Co., Magnolia, O.....	John Hilleman, Magnolia, Ohio
Heatherington No. 2.....	Sterling Mining Co., Cleveland, O.....	Wm. Maloney, Cleveland, Ohio
Somers No. 7.....	C. W. Somers, Cleveland, O.....	Wm. Maloney, Cleveland, Ohio
Somers No. 8.....	C. W. Somers, Cleveland, O.....	Wm. Maloney, Cleveland, Ohio

COLUMBIANA COUNTY.

Slope	O. & P. Coal Co., Cleveland, O.....	James Black, Cleveland, Ohio
Slope No. 2	O. & P. Coal Co., Cleveland, O.....	James Black, Cleveland, Ohio
Hayes	James Strabley, Salineville, O.....	C. R. Probst, Salineville, O.
Cedar Hill	Big Vein Coal Co., Cleveland, O.....	Suspended
New Shaft	Big Vein Coal Co., Cleveland, O.....	Hugh Laughlin, Salineville, O.
Foster	Foster Coal Co., Salineville, O.....	E. M. Peters, Lee, Ohio
State Line No. 3.....	State Line Coal Co., East Palestine, O.....	E. W. Powers, New Salem, Ohio
Cherry Valley No. 3.....	Cherry Valley Iron Works, Leetonia, O.....	Wm. Dunn, Salem, Ohio
Pleasant Valley No. 6.....	Powers Mining Co., Negley, O.....	Thomas Prosser, Lisbon, Ohio
Pleasant Valley No. 7.....	Powers Mining Co., Negley, O.....	Thomas Prosser, Lisbon, Ohio
Salem	Salem Coal Co., Salem, O.....	Thos. D. Suthe, Waterford, Ohio
Folts or Pine Hill.....	Card & Prosser, Lisbon, O.....	I. N. Russell, Waterford, Ohio
Card & Prosser No. 4.....	Card & Prosser, Lisbon, O.....	Grant Hill, E. Palestine, Ohio
Fairfield No. 2.....	Fairfield Coal Co., Wooster, O.....	E. J. Marshall, Leetonia, Ohio
Oak Grove Slope.....	Columbia Fire Clay Co., Cleveland, O.....	C. C. Herriott, Leetonia, Ohio
Prospect Hill No. 2.....	Prospect Hill Coal Co., East Palestine, O.....	T. R. Lewis, Waterford, Ohio
Lisbon	Lisbon Coal Co., Cleveland, O.....	Charlton Dixon, Salem, Ohio
Dewey No. 2.....	Herriott Coal Co., Elkton, O.....	W. N. Stone, Salem, Ohio
Leetonia	Leetonia Coal Co., Leetonia, O.....	H. B. McCroy, Irwin, Ohio
McNabb	J. B. McNabb, Salem, O.....	I. N. Russell, Waterford, Ohio
Peerless	Townsend Coal Co., Cleveland, O.....	
New Salisbury	Norris Min. & Mfg. Co., Pittsburg, Pa.....	
Big Walnut	Peerless Coal Co., Cleveland, O.....	

JEFFERSON COUNTY.

Bergholz	Yellow Creek Coal Co., Bergholz, O.....	John Kirk, Bergholz, Ohio
West Pittsburg	Eastern Ohio Coal Co., Cleveland, O.....	K. Head, Irondale, Ohio
Rolling Mill No. 2.....	Irondale Coal Co., Irondale, O.....	R. H. Corman, Columbus, Ohio
Ruthven or Jumbo	Salisbury Coal Co., Columbus, O.....	Wm. Herbert, Ashtabula, Ohio
Zerbe Shaft	O. & P. Coal Co., Cleveland, O.....	

MAHONING COUNTY.

Fairview No. 3.....	Ohio Coal & Clay Co., Washingtonville, O.....	John Hilleman, Washingtonville, Ohio
Stouffer	National Coal & Clay Co., Washingtonville, O.....	
McKinley	Lake Erie & Southern Coal Co., Cleveland, Ohio	W. B. Myers, Bellefonte, Pa.
Stambaugh	The Evans Block Coal Co., Youngstown, O.....	John F. Waters, Youngstown, Ohio
Greer	Zimmerman & Orr, Salem, O.....	George Orr, Salem, Ohio

SIXTH DISTRICT.

JAS. P. DAVIS, *Inspector*, Salem, Ohio.

CARROLL COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seams penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift	Furnace	6	3½	Double	Rope	Valley R. R.
Drift	Furnace	5	.....	Double	Mule	C. & P.
Shaft, 66 ft..	Fan	5	4	Double	Mule	Valley R. R.
Drift	Furnace	7	4	Double	Rope	W. & L. E.
Drift	Furnace	5	4	Double	Mule	C. & P.
Drift	Furnace	Strip Vein.	2½	Double	Mule	C. & P.
Shaft, 64 ft..	Furnace	6	4	Double	Mule	W. & L. E.
Shaft, 136 ft.	Furnace	6	4	Double	Mule	W. & L. E.
Slope, 300 ft.	Fan	7	5½	Double	Motor	C. & P.
Slope, 750 ft.	Fan	7	.....	Double	Motor .....	.....
Drift	Furnace	7	5	Double	Mule	C. & P.
Drift	Fan	7	4½	Double	Rope	C. & P.
Shaft, 40 ft..	Fan	7	5	Double	Rope	C. & P.
Drift	Furnace	6	2½	Single	Rope	P. Ft. W. & C.
Slope, 250 ft.	Fan	3	3	Single	Rope	Erie R. R.
Drift	Fan	6	3	Single	Mule	P. S. & W.
Drift	Furnace	7	2½	Single	Mule	P. S. & W.
Drift	Fan	3	3	Single	Mule	Salem R. R.
Shaft, 44 ft..	Fan	6	3	Single	Mule	Erie R. R.
Drift	Fan	Strip Vein.	2½	Single	Mule	Erie R. R.
Drift	Fan	6	3½	Single	Rope	P. F. W. & C.
Slope, 225 ft.	.....	3	6	Single	Rope	Salem R. R.
Slope, 290 ft.	Fan	6	3½	Single	Rope	P. Ft. W. & C.
Drift	Fan	6	3½	Single	Rope	Erie R. R.
Drift	Furnace	6	2½	Single	Mule	P. L. & W.
Slope, 125 ft.	Fan	3	2½	Single	Rope	P. Ft. W. & C.
Shaft, 235 ft.	Fan	3	3	Single	Mule .....	.....
Slope, 115 ft.	.....	6	3	Single	Rope	Salem R. R.
Drift .....	.....	7	4½	Double	Mule	C. & P.
Slope, 285 ft.	.....	3	3½	Single	Rope	Salem R. R.
Drift	Fan	5	2½	Single	Mule	L. E. A. & W.
Slope, 210 ft.	Fan	6a	5	Double	Motor	L. E. A. & W.
Drift	Furnace	7	5½	Double	Mule	C. & P.
Drift	Fan	7	4	Single	Motor	L. E. A. & W.
Shaft, 189 ft.	Fan	6a	5½	Double	Mule	L. E. A. & W.
Slope	Fan	3	2-8	Single	Rope	Erie R. R.
Shaft, 38 ft..	Fan	3	2½	Single	Mule	Erie R. R.
Shaft, 61 ft..	Fan	3	3	Single	Mule	P. Ft. W. & C.
Shaft, 110 ft.	.....	1	3½	Single	Mule .....	.....
Shaft, 96 ft..	Fan	3	2½	Single	Mule .....	.....

of M.

SIXTH DISTRICT—Concluded.

PORTAGE COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Hutson No. 4.....	Hutson Coal Co., Lloyd, O.....	Thos. J. Williams, L Ohio
Hutson No. 6.....	Hutson Coal Co., Lloyd, O.....	Thos. J. Williams, L Ohio
Mullin Shaft	Mullin Coal Co., Wooster, O.....	W. J. Mullin, Massillon

TRUMBULL COUNTY.

Keel Ridge	Witch Hazel Coal Co., Youngstown, O.....	W. J. Sampson, Youngstown, O.
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TUSCARAWAS COUNTY.

Thompson Run E.....	C. W. Somers, Cleveland, O.....	Wm. Maloney, Sher ville, O.
Thompson Run W.....	C. W. Somers, Cleveland, O.....	Wm. Maloney, Sher ville, O.

SIXTH DISTRICT—Concluded.

PORTAGE COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Shaft, 214 ft.	Fan	1	3-9	Single	Mule	L. E. A. & W.
Shaft, 153 ft.	Fan	1	4	Single	Mule	L. E. A. & W.
Shaft	Fan	1	4	Single	Mule	L. E. A. & W.
Drift	Furnace	5	4	Single	Rope	L. S. & M. S.
Drift	Fan	7	5	Double	Motor	W. & L. E.
Drift .....	.....	.....	.....	.....	Motor .....	.....

THE SEVENTH MINING DISTRICT.

The Seventh Mining District is composed of the Counties of Medina, Stark, Summit, Wayne and Holmes, and is under the supervision of W. H. Miller, Massillon, Ohio. The total output of this District amounted to 1,389,537 tons of coal. The general condition of the Coal Industry for the year was prosperous, no strikes or labor disturbances occurring.

The coal veins of this District are quite irregular, but all proven coal lands are being rapidly taken up. As coal has been mined in this District for forty-five years, it is somewhat difficult to determine the amount of coal lands that have already been developed. It seems to be the general opinion that all the extensive coal lands have already been mined out.

In Medina County, the Number 1 seam of coal is found at a depth of from 50 to 100 feet, is used for fuel purposes on the Erie Railroad. In Stark County is found the Numbers 1, 4 and 6 seams of coal, principally used for domestic purposes; in Summit County the coal is found at a depth of from 100 to 140 feet, used for domestic purposes. The Number 1 seam is found in Wayne County, at a depth of from 75 to 150 feet, and is also used for domestic purposes.

Two hundred and thirty-one (231) visits were made to the mines of this District during the year 1902. Eight (8) fatal accidents were reported as occurring in this District for the year 1902.

SEVENTH DISTRICT.

W. H. MILLER, *Inspector*, Massillon, Ohio.

STARK COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
No. 1	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 2	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
No. 3	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
No. 4	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 5	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 7	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 8	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 9	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
No. 11	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
No. 12	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 13	Massillon Coal Mining Co., Massillon, O.	Wm. Baumgartner, No. Lawrence, O.
No. 15	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
No. 16	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
No. 17	Massillon Coal Mining Co., Massillon, O.	T. F. Geitz, Massillon.
Elm Run No. 3	Massillon Elm Run Coal Co., Canton, O.	L. Brenkamp, Massillon.
Elm Run No. 4	Massillon Elm Run Coal Co., Canton, O.	L. Brenkamp, Massillon.
Pleasant Valley	Pleasant Valley Coal Co., Alliance, O.	J. Livingston, Paris, O.
Summit Hill	L. E. Smith, Greentown, O.	
Carr	A. C. Dustman, Alliance, O.	A. C. Dustman, Alliance
Lake Erie No. 2	Monongahela & L. E. Coal Co., Osnaburgh, Ohio	
Woodland	Massillon-Cleveland Coal Co., Cleveland, O.	D. R. Jones, East Gr. ville, O.
Eureka	Massillon-Cleveland Coal Co., Cleveland, O.	A. Brenkamp, Crystal Springs, O.
Pocock	Pocock Coal Co., Massillon, O.	C. A. Kouth, Massillon.
Pocock No. 2	Pocock Coal Co., Massillon, O.	C. A. Kouth, Massillon.
Massillon F. B.	Massillon Fire Brick Co., Massillon, O.	W. J. Hipp, Massillon.
McGinty	Louisville Brick & Tile Co., Louisville, O.	E. H. Jones, Louisville.
Indian Run	Indian Run Coal Co., Canton, O.	David Carrell, Osnab. Ohio
Stark	Stark Coal Co., Massillon, O.	J. L. Greene, Massillon.
Brookfield	Davis & Somers, Canton, O.	
Canton Stoneware	Canton Hollow Block Co., Canton, O.	Jno. Hadley, Canton, O.
Pigeon Run	Pigeon Run Coal Co., Massillon, O.	J. J. Burger, Massillon.
Crescent	Crescent Coal Co., Alliance, O.	J. H. Walker, Paris, O.
C. & O. B.	National Fire Roofing Co., Osnaburgh, O.	John Merley, Canton, O.
Sherwood	Livers & Smith, West Brookfield, O.	C. F. Smith
Cassingham	Cassingham Coal Co., Cleveland, O.	F. J. Kellar, Massillon.
Canton C. M. Co.	Canton Coal Mining Co., Canton, O.	A. C. Holderbarn, Can. Ohio
White Oak	White Oak Coal Co., Cleveland, O.	Thomas Williams, Cl. Fulton, O.
Davis & Wolf	Wolf & Davis Coal Co., Osnaburgh, O.	Thomas Wolf, Osnaburgh.
Whitacre No. 5	Whitacre Fire Brick Co., Waynesburg, O.	R. E. Whitacre, Way. burg, O.
Whitacre No. 6	Whitacre Fire Brick Co., Waynesburg, O.	R. E. Whitacre, Way. burg, O.

WAYNE COUNTY.

Billman	Card & Prosser Coal Co., Cleveland, O.	John Whelan, Jr., W. worth, O.
Stewart	Card & Prosser Coal Co., Cleveland, O.	John Whelan, Jr., W. worth, O.
New Chippewa	Wagoner Coal Co., Akron, O.	F. S. Landes, Doylestown, Ohio
W. on No. 1	West Lebanon Coal Co., Wooster, O.	W. H. Devey, Warwick

INSPECTOR OF MINES.

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SEVENTH DISTRICT.

W. H. MILLER, *Inspector*, Massillon, Ohio.

STARK COUNTY.

Kind of opening.	Mode of Ventilation.	No. of seams penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
ft. 208 ft.	Fan	1	5	Double	Mule	P. Ft. W. & C. R. R.
ft. 200 ft.	Fan	1	5	Double	Mule	P. Ft. W. & C. R. R.
ft. 161 ft.	Fan	1	5	Double	Mule	W. & L. E.
ft. 200 ft.	Fan	1	5	Double	Rope and mule.	W. & L. E.
ft. 205 ft.	Ex. steam ..	1	4½	Double	Mule	W. & L. E.
ft. 285 ft.	Fan	1	5½	Double	Mule	W. & L. E.
ft. 200 ft.	Fan	1	6	Double	Mule	W. & L. E.
ft. 150 ft.	Fan	1	4	Double	Mule	P. Ft. W. & C. R. R.
ft. 47 ft.	Fan	1	4½	Double	Mule	C. A. & C.
ft. 200 ft.	Ex. steam ..	1	5	Double	Mule	W. & L. E.
ft. 200 ft.	Fan	1	5	Double	Mule	W. & L. E.
ft. 125 ft.	Fan	1	4½	Double	Mule	C. L. & W.
ft. 100 ft.	Fan	1	4	Double	Mule	P. Ft. W. & C. R. R.
ft. 225 ft.	Ex. steam ..	1	5	Double	Mule	W. & L. E.
ft.	Fan	1	5	Double	Mule	C. L. & W.
ft.	Fan	1	5	Double	Mule	C. L. & W.
ft.	Furnace	5	3	Single	Mule	A. & N.
ft.	Furnace	4	6	Single	Mule	Valley R. R.
ft. 50 ft.	Furnace	5	3	Single	Mule	
ft.						
ft. 250 ft.	Fan	1	5	Double	Mule	C. L. & W.
ft. 100 ft.	Ex. steam ..	1	4	Double	Mule	C. L. & W.
ft. 245 ft.	Fan	1	5	Double	Mule	W. & L. E.
t.	Furnace	Clay.	5	Single	Mule	P. Ft. W. & C.
t.	Furnace	6	3	Single	Mule	P. Ft. W. & C.
t.	Furnace	6	3	Double	Mule	W. & L. E.
ft. 190 ft.	Ex. steam ..	1	4	Double	Mule	W. & L. E.
ft. 109 ft.	Ex. steam ..	.....	.....	Double	Mule	W. & L. E.
t.	Furnace	4	5	Double	Mule	W. & L. E.
ft. 158 ft.	Ex. steam ..	1	5	Double	Mule and rope.	W. & L. E.
se. 215 ft.	Fan	5	3	Single	Mule	A. & N. R. R.
t.	Furnace	6	3	Single	Mule	W. & L. E.
ft. 31 ft.	Ex. steam ..	1	4	Single	Mule	W. & L. E.
se. 150 ft.	Fan	1	4	Double	Mule	P. Ft. W. & C. R. R.
ft. 66 ft.	Ex. steam ..	6	4½	Double	Mule	
se. 950 ft.	Ex. steam ..	1	4	Double	Mule	P. Ft. W. & C. R. R.
t.	Natural	4	2-2/3	Double	Mule	
t.	Furnace	4	2-2/3	Single	Mule	
t.	Furnace	4	2-2/3	Single	Mule	
e. 357 ft.	Ex. steam ..	1	4	Double	Mule	Erie R. R.
t. 112 ft.	Ex. steam ..	1	4	Double	Mule	Erie R. R.
e. 350 ft.	Ex. steam ..	1	4	Double	Mule	Erie R. R.
t. 101 ft.	Ex. steam ..	1	5½	Double	Mule	C. A. & C.

ANNUAL REPORT

SEVENTH DISTRICT—Concluded.

WAYNE COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address Superintendent.
Dalton No. 14.....	Massillon Coal Mining Co., Massillon, O..	Wm. Baumgardner, No Lawrence, O.
Boak	Warwick Sand Stone & Brick Co., Clin- ton, O.....	W. H. Devey, Warwick
MEDINA COUNTY.		
Card Slope No. 3.....	Card Coal Co., Cleveland, O.....	O. V. Dibble. Wadsw Ohio
Card Slope No. 5.....	Card Coal Co., Cleveland, O.....	O. V. Dibble. Wadsw Ohio
Whelan No. 2.....	Card Coal Co., Cleveland, O.....	Jno. Whelan, Jr., W worth, O.
Klondike	Hutchinson Coal Co., Wadsworth, O.....	Jno. Hutchison, W worth, O.....
Wagoners	Excelsior Coal Co., Akron, O.....	D. Golden, Doylestown.
Easter	Sliver Creek Coal Co., Wadsworth, O.....	Richard Allen, Wadsw Ohio
Wayne No. 2.....	Ohio Salt Co., Wadsworth, O.....	S. Evans, Wadsworth,
SUMMIT COUNTY.		
Turkey Foot	Brewster Coal Co., Akron, O.....	J. J. Dagenhard
No. 10	Massillon Coal Mining Co., Massillon, O..	T. F. Geltz, Massillon,

SEVENTH DISTRICT—Concluded.

WAYNE COUNTY—Concluded.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Shaft, 125 ft.	Ex. steam ..	1	4	Double	Mule	W. & L. E.
Drift	Natural	1	4	Single	Mule	C. L. & W.
Slope, 180 ft.	Furnace	1	4	Double	Mule	Erie R. R.
Slope, 120 ft.	Ex. steam ..	1	5	Double	Mule	Erie R. R.
Slope, 300 ft.	Ex. steam ..	1	4	Double	Mule	Erie R. R.
Slope, 150 ft.	Furnace	1	3-4	Double	Mule	Erie R. R.
Slope, 361 ft.	Ex. steam ..	1	4	Double	Mule	Erie R. R.
Slope, 225 ft.	Ex. steam ..	1	4	Double	Mule	Erie R. R.
Slope, 157 ft.	Ex. steam ..	1	4	Single	Mule	Erie R. R.
Shaft, 147 ft.	Fan	1	4	Double	Mule	C. A. & C.
Shaft, 145 ft.	Fan	1	4	Double	Mule	C. A. & C.

LIST OF FIRE CLAY MINES.

Name of Operator or Owner.	P. O. Address.
<i>Athens County.</i>	
Nelsonville Sewer Pipe Co.....	Nelsonville.
Athens Brick Co.....	Athens.
Wassall Clay Co.	Columbus.
<i>Carroll County.</i>	
Minerva Paving Brick Co.	Minerva.
Canton & Malvern F. B. & P. Co.....	Canton.
National Fire Roofing Co.....	Magnolia.
Malvern Fire Clay Co.....	Malvern.
Greer-Beatty Fire Clay Co.....	Magnolia.
<i>Columbiana County.</i>	
Michael Murphy	East End, East Liverpool.
Vulcan Clay Co.	Wellsville.
U. S. Fire Roofing Co.....	Pittsburg.
Columbia Fire Clay Co.....	Cleveland.
Standard Pottery Co.....	Salineville.
Champion Clay Co.....	Wellsville.
American Sewer Pipe Co.....	Pittsburg.
Card & Prosser Coal Co.....	Lisbon.
Jas. Mullins	Wooster.
<i>Guernsey County.</i>	
Guernsey Brick and Construction Co..	Cambridge.
<i>Hocking County.</i>	
Columbus Brick and Terra Cotta Co.....	Columbus.
Parley Phelps	Gore.
Logan Brick Mfg. Co.....	Logan.
Joe Bartholomew	Logan.
Leroy Kemper	Gore.
The Haydenville Co.	Haydenville.
<i>Holmes County.</i>	
Millersburg Brick and Tile Co.....	Millersburg.
David Miller	R. R. No. 5, Miller burg.
Redett & Sons	Fredericksburg.
<i>Jackson County.</i>	
Oak Hill F. B. & Coal Co.....	Oak Hill.
Aetna Fire Brick Co.....	Oak Hill.

LIST OF FIRE CLAY MINES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Jefferson County.</i>	
enor Fire Clay Co.....	Empire.
lio River Sewer Pipe Co.....	Empire.
ronto F. C. Co.....	Steubenville.
olph Pritschaw	Irondale.
st Ohio Sewer Pipe Co.....	Irondale.
<i>Lawrence County.</i>	
nging Rock Iron Co.....	Hanging Rock.
B. Willard	Steece.
nton Portland Cement Co.....	Ironton.
<i>Mahoning County.</i>	
eenford Fire Clay Co.....	Greenford.
C. Walters.....	Poland.
J. Dustman	Berlin Center.
rfield Brick Co.	Alliance.
bert Auld	Salem.
tional Coal and Clay Co.....	Washingtonville.
<i>Muskingum County.</i>	
ancey Ford.....	Roseville.
th Zanesville S. P. & B. Co.....	South Zanesville.
M. Stump.....	Zanesville.
n. Bunting.....	Zanesville.
orge Melhollin.....	Hopewell.
Emery.....	Zanesville.
erican Sand & Facing Co.....	Columbus.
<i>Perry County.</i>	
omon Hightshoe.....	Somerset.
uel Sharkey.....	Crooksville.
uel McKeever.....	Crooksville.
Lexington Pressed Brick Co.....	New Lexington.
o Mining and Manufacturing Co.....	Shawnee.
e Gossman	Crooksville.
E. Stoneburner.....	Crooksville.
ton Allen.....	Roseville.
<i>Scioto County.</i>	
to Star Fire Brick Works.....	Sciotoville.
tsmouth-Harrison-Walker Co.....	Portsmouth.
to Fire Brick Co.....	Sciotoville.
gan & Horton.....	Elfort.
E. Ketler.....	Lilly.

LIST OF FIRE CLAY MINES—Concluded.

Name of Owner or Operator.	P. O. Address
<i>Stark County.</i>	
Metropolitan Paving Brick Co.....	Canton.
Rev. J. H. Harrier.....	North Industry.
Massillon Stone & F. B. Co.....	Massillon.
The H. B. Camp Co.....	Akron.
Riley Newhouse.....	Magnolia.
Louisville Brick & Tile Co.....	Louisville.
Diamond Portland Cement Co.....	Middlebranch.
Champion Tile Works.....	Louisville.
Canton Sparta Brick Co.....	Mineral City.
National Fire Roofing Co.....	Osnaburg.
Canton Hollow Brick Co.....	Canton.
Worhoust & Co.....	Massillon.
<i>Summit County.</i>	
Robinson Merrill Pottery Co.....	Akron.
R. S. DeHaven.....	R. R. No. 1, East Akron.
W. J. Webb.....	Mogadore.
H. I. Swinehart.....	East Akron.
J. Stetler.....	R. R. No. 1, East Akron.
Akron Clay Co.....	Akron.
Akron Tile Roofing Co.....	Akron.
The Robinson Bros. Co.....	Akron.
American Clay Manufacturing Co.....	Pittsburg, Pa.
<i>Trumbull County.</i>	
J. V. Rose.....	Sharon, Pa.
<i>Tuscarawas County.</i>	
American Clay Manufacturing Co.....	Urichsville.
Buckeye Fire Clay Co.....	Urichsville.
Advance Clay Co.....	Urichsville.
Dover Fire Brick Co.....	Strasburg.
C. E. Holden.....	Mineral C.
George J. Markley.....	Mineral C.
J. J. Cristner & Sons.....	Baltic.
Crown Fire Clay Co.....	Akron.
Paul Clay Co.....	Akron.
American Fire Brick & Clay Co.....	Mineral C.
Robinson Clay & Product Co.....	Akron.
<i>Vinton County.</i>	
Jacob Earnheart.....	Hue.

LIST OF IRON ORE MINES.

Name of Owner or Operator.	P. O. Address.
<i>Jackson County.</i>	
W. B. Yates.....	Kitchen.
<i>Lawrence County.</i>	
Hecla Charcoal & Iron Co.....	Ironton.
The Vernon Iron Co.....	Campbell.
McGugin & Co.....	Olive Furnace.
Hanging Rock Iron Co.....	Hanging Rock.
E. B. Willard.....	Steece.
<i>Scioto County.</i>	
The Clare Iron Co.....	Bloom Switch.
Morgan & Horton.....	Elfort.

LIST OF LIMESTONE QUARRIES.

Name of Owner or Operator.	P. O. Address.
<i>Adams County.</i>	
John McNeillan.....	West Union.
R. J. Kincaid.....	West Union.
S. L. Rice	Portsmouth.
J. H. Ellison.....	Manchester.
Samuel Hopkins.....	Manchester.
<i>Allen County.</i>	
C. L. Sanford.....	Lima.
A. R. Deming.....	Lima.
David Joseph	Lima.
Fetter & Sons.....	Lima.
Frank Roush	Lima.
Edward Gray	Lima.
J. W. Long.....	Lima.
Watt Bros.	Herring.
L. J. Sidall.....	Bluffton.
Conrad Tribblehorn	Bluffton.
Mollett Bros.	Bluffton.
E. J. Ford.....	Elida.
Arthur L. Fisher.....	Delphos.
Pugh Stone Co.....	Lima.
<i>Belmont County.</i>	
Meister Bros.	Bridgeport.
<i>Butler County.</i>	
John Killfoyle	Hamilton.
D. M. Skelley.....	Hamilton.
J. B. Scott.....	Hamilton.
G. Kuentzle	Hamilton.
Daniel Pabst	Hamilton.
A. Law	Trenton.
W. H. McCurley.....	Ross.
<i>Clark County.</i>	
The Strunk Meyer Co.....	Cold Springs.
Casparis Stone Co.....	Columbus.
Springfield Stone & Lime Co.....	Springfield.
Samuel S. Taylor.....	Springfield.
Mills Bros	Springfield.
The Moores Lime Co.....	Springfield.
J. W. Jenkins.....	Springfield.
W. A. Rubsam.....	Springfield.
Daniel Baker	Enon.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Clermont County.</i>	
ll.....	Loveland.
iarlow.....	Marathon.
.....	Batavia.
<i>Crawford County.</i>	
r.....	Osceola.
d Stone Co.....	Bucyrus.
.....	Lykens.
.....	Spore.
<i>Clinton County.</i>	
ars.....	Wilmington.
l.....	Wilmington.
vn.....	Wilmington.
lehr.....	Wilmington.
r.....	Wilmington.
esby.....	Clare.
d.....	Wilmington.
k.....	R. R. No. 1, Wilming-
.....	ton.
t.....	West Woodville.
.....	West Woodville.
<i>Delaware County.</i>	
bell.....	Delaware.
ens.....	Delaware.
& Sons.....	Radnor.
nt.....	Rathbone.
ey.....	Rathbone.
n.....	Warrenburg.
& Stone Co.....	Delaware.
<i>Darke County.</i>	
ey.....	Greenville.
eth.....	Weaver's Station.
<i>Erie County.</i>	
ffe.....	Sandusky.
.....	Sandusky.
Stone Co.....	Sandusky.
er.....	Sandusky.
d Lime & Transport Co.....	Cleveland.
.....	Sand Hill.
s.....	R. R. No. 2. San-
.....	dusky.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Franklin County.</i>	
Wm. Miller	Columbus.
The Columbus Stone Co.....	Columbus.
The Casparis Stone Co.....	Columbus.
James F. Legg	Marble Cliff.
J. M. McLinch	Columbus.
Wm. Lamb	Dublin.
J. C. Thompson.....	Dublin.
N. Scofield	Hilliards.
<i>Greene County.</i>	
Mary J. Archer.....	Zimmerman.
The D. S. Irwin Co.....	Cedarville.
John B. Taylor.....	Cedarville.
Boots, Bickett & Conklin.....	New Jasper.
Geo. C. Toland.....	Jamestown.
<i>Hamilton County.</i>	
Runnelbohm Grower	Cincinnati.
Ernest Howe	Cincinnati.
City Work House.....	Cincinnati.
Benjamin Cooney	Cincinnati.
Henry Stagg & Son.....	Cincinnati.
John Goodman	Cincinnati.
Arthur W. Davis.....	Cincinnati.
Grant Bros.,	Mt. Lookout, Sta C, Cincinnati.
Nicholas Ruebel	Cincinnati.
Mary Zaeske	Westwood, Stati L. Cincinnati.
W. R. Moore.....	Terrace Park, C incinnati.
F. E. Weihe.....	Carthage.
Chas. M. Fields.....	Glendale.
Jacob Weber	Carthage.
Rucker Stone Co.....	Greenfield.
C. S. Boone	Milford.
<i>Hancock County.</i>	
J. W. Wells & Son.....	Findlay.
Mrs. E. Hirsher.....	Findlay.
Isaac Hershey	Findlay.
W. L. Schoonover.....	Findlay.
Tarbox & McCall.....	Findlay.
D. B. Krout.....	Mt. Blanchard.
Lauder Bros.	Arlington.
David Huffman	Ranson.
Amos Runkle	Ranson.
C. E. Edington	McComb.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Hardin County.</i>	
essell.....	Ada.
s.	Ada.
nd	Dunkirk.
rthur.....	Kenton.
zogg	Patterson.
<i>Highland County.</i>	
harp	Lynchburg.
st	Greenfield.
tone Co.....	Greenfield.
t	Leesburg.
sher	Leesburg.
kerton.....	Lynchburg.
<i>Holmes County.</i>	
Duncan.....	Millersburg.
<i>Jackson County.</i>	
Roberts & Hopkins.....	Wellston.
tes.....	Kitchen.
<i>Lawrence County.</i>	
lard & Co.....	Ironton.
ortland Cement Co.....	Ironton.
Rock Iron Co.....	Hanging Rock.
& Co.....	Olive Furnace.
<i>Logan County.</i>	
Line Stone & Lime Co.....	Bellefontaine.
: Cantwell.....	Bellefontaine.
wn & Son.....	Belle Center.
Stratton	West Millersburg.
tt	West Liberty.
ndel	West Liberty.
<i>Lucas County</i>	
Henehan	Toledo.
y & Son.....	White House.
os.	Maumee.
<i>Marion County.</i>	
Evans Lime & Stone Co.....	Marion.
is & Christian L. & S. Co.....	Marion.
Fairbank	Marion.
ivans.....	Owens.
amon.....	Marion.
of M.	

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Miami County.</i>	
Maxwell Stone Co.....	Ludlow Falls.
F. M. Coppock.....	Ludlow Falls.
Joseph Kopp.....	Ludlow Falls.
D. C. Stalter.....	Piqua.
The Ohio Marble Co.....	Piqua.
D. L. Face.....	Covington.
J. W. Ruhl.....	Covington.
C. B. Fletcher.....	Covington.
Levi Falknor.....	Covington.
Chas. Hoover.....	R. R. No. 4, Covington.
S. E. Bixler.....	Covington.
S. McLaughlin.....	North Clayton.
J. M. C. Dean.....	Brandt.
Jas. A. Brubaker & Son.....	Rex.
Chas. Jackson.....	Covington.
W. Youtsey.....	Troy.
The Tippecanoe Bldg. & Mnfg. Co.....	Tippecanoe City.
<i>Montgomery County.</i>	
The Lewis & Talbot Stone Co.....	Dayton.
James Manuel.....	Centerville.
Daniel Yost.....	Dayton.
D. P. Oram.....	R. R. No. 3, Dayton.
Mrs. Chas. W. Barr.....	R. R. No. 9, Dayton.
Jos. Julick.....	R. R. No. 4, Dayton.
N. E. Kimmel.....	Dayton.
J. Seybould.....	Box 36, Dayton.
H. B. Shoup.....	Dayton.
H. M. Evans.....	Englewood.
D. A. Menges.....	Englewood.
David Shaw.....	Union.
Wm. Martindale.....	Union.
Samuel Fortney.....	Germantown.
Phillip Weaver.....	Farmersville.
A. J. Shaffer.....	Brookville.
Henry Troutman.....	Amity.
<i>Muskingum County.</i>	
R. E. Cowden.....	Dresden.
A. Emery.....	Zanesville.
<i>Mercer County.</i>	
Emil Wagner.....	Ft. Recovery.
<i>Ottawa County.</i>	
The Toledo White Lime Co.....	Martin.
The Clark Co.....	Clay Center.
Dr. Joseph Kingham.....	Rocky Ridge.
L. A. Beatty.....	Rocky Ridge.
Kelley Island L. & T. Co.....	Cleveland.
James Duncan.....	Toledo.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Paulding County.</i>	
nson	Junction.
rman	Roselms.
& Son.....	Scott.
.....	Oakwood.
<i>Pickaway County.</i>	
Z. McCoy.....	Circleville.
<i>Pike County.</i>	
.....	Sinking Springs.
<i>Perry County.</i>	
y.....	Maxville.
<i>Preble County.</i>	
lott.....	College Corner.
gh.....	College Corner.
our.....	College Corner.
ht.....	College Corner.
t	College Corner.
.....	Fair Haven.
or	Eaton.
autz & Co.....	Eaton.
.....	Lewisburg.
n & Co.....	Lewisburg.
Sloan.....	Morning Sun.
te	Camden.
.....	Camden.
s	Eaton.
.....	Morning Sun.
illy	New Paris.
yer	Eaton.
& Richmond Stone Co.....	Richmond, Ind.
.....	West Alexandria.
<i>Putnam County.</i>	
s.....	R. R. No. 2, Ottawa.
it	Pandora.
as	Rimer.
.....	Rimer.
rman	Ft. Jennings.
ner	Ottoville.
rs	Cascade.
.....	Gilboa.
oemaker.....	Columbus Grove.
Kroft	Ada.
<i>Ross County.</i>	
ie Co.....	Greenfield.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
<i>Sandusky County.</i>	
Gottron Bros.	Fremont.
A. R. Corser	Fremont.
B. Sonner	Fremont.
Dohn Limestone Co.	Gibsonburg.
Zorn-Hornung Co.	Gibsonburg.
J. J. Urshell	Woodville.
<i>Summit County.</i>	
W. J. Webb	Mogadore.
<i>Seneca County.</i>	
E. H. France	Bloomville.
Koller & Geiger	Bloomville.
Fred Seivert	Bloomville.
S. A. Saul	Bloomville.
G. E. Detwiler	Bloomville.
Weott Bros.	Tiffin.
Tiffin Lime, Building and Sandstone Co.	Tiffin.
The McCullum Lime Co.	Tiffin.
J. L. Dozer	Fostoria.
Dougherty & Co.	Toledo.
Harpster & Humphrey	Flat Rock.
Wm. Armstrong	Republic.
John Baker	Omar.
P. Dennis	Flat Rock.
<i>Stark County.</i>	
David Wearstler	Oval City.
Bert Clapsaddle	Marlboro.
Maple Spring Lime and Coal Co.	North India
Diamond Portland Cement Co.	Middlebran
Walter Seifort	Paris.
<i>Scioto County.</i>	
Clare Iron Co.	Bloom Swi
Morgan & Horton	Eifort.
<i>Tuscarawas County.</i>	
Crown Fire Clay Co.	Akron.
<i>Union County.</i>	
C. H. Seeley	Jerome.

LIST OF LIMESTONE QUARRIES—Concluded.

Name of Operator or Owner.	P. O. Address.
<i>Van Wert County.</i>	
e	Convoy.
ice	Bloomville.
mple	Van Wert.
r & Sons.....	Middlepoint.
& Co.	Willshire.
f Stone Co.....	Willshire.
reland	Van Wert.
ersock & Co.....	Wetsel.
<i>Wood County.</i>	
City Co.....	Toledo.
r & Co.....	Toledo.
me Co.	Sugar Ridge.
Lime Co.	Bowling Green.
ey	Toledo.
.....	Grand Rapids.
Miller	Bowling Green.
rcer	Bowling Green.
.....	Hammanburg.
t Son.....	Carey.
& Co.	Toledo.

MINING LAWS

OF THE

STATE OF OHIO

WITH

LATEST AMENDMENTS

PUBLISHED BY E. G. BIDDISON,
CHIEF INSPECTOR OF MINES.

Mining Laws of Ohio.

INSPECTOR OF MINES.

290. For the purpose of facilitating an efficient inspection of mines in Ohio, and to provide an inspecting force therefor, the Governor shall appoint, and with the consent of the senate, one chief inspector, with the approval of the governor, shall appoint district inspectors of mines; the chief inspector shall hold his office for the term of four years, and the district inspectors shall hold their office for the term of three years from the date of their appointment, and until their successors are appointed and qualified; the first appointment shall be made within thirty days from the date of the taking effect of this act; and in case of the removal or death of the chief inspector, or any district inspector, the vacancy shall be filled in the manner provided for original appointments for the unexpired term of the position so made vacant. No person shall be appointed chief inspector of mines unless he is possessed of sufficient knowledge of chemistry, the geology of Ohio, and of the geology, in so far as those sciences relate to mining, practical knowledge of mining engineering, and of the different systems of working and ventilating mines, of the nature and properties of the noxious and poisonous gases in mines, particularly fire damp, and of the best means of preventing and removing the same; and no person shall be appointed district inspector of mines unless he be a miner of at least five years' experience, and a resident of the district for which he is appointed, for at least one year, and is possessed of a practical knowledge of the different systems of working and ventilating mines, of the means of detecting the presence of bad or foul air, noxious and poisonous gases, and of the best means of preventing and removing the same.

Appointment
of chief and
district in-
spectors; who
eligible.

290a. That authority be and is hereby given to the Governor to appoint additional district inspectors of mines; and they shall be appointed in the same manner and possess the same qualifications and receive the same compensation as the five district inspectors of mines authorized by said Sec. 290. The term of office of the two district inspectors of mines first appointed shall be three years, and they shall take and give bond, as provided in Sec. 291 of the Revised Code of Ohio, and shall be subject to the regulations and requirements of the district inspectors authorized by Sec. 290, as provided in chapter nine of the Revised

Additional
district in-
spectors.

Statutes of Ohio. The chief inspector of mines shall sign said additional inspectors for service in districts designated by him, and he is authorized to divide them in seven districts, in each of which one of the district inspectors of mines shall reside.

Bond and
oath.

SEC. 291. Before entering upon the discharge of their respective offices, the chief inspector and district inspectors shall give bond to the State, the sum of five thousand dollars, and the latter in the sum of two thousand dollars each, to be approved by the governor, conditioned for the faithful performance of their duties respectively; said bonds, with an oath of office on the part of the inspectors, and the approval of the governor indorsed thereon, shall be deposited with the Secretary of State; the inspectors, while in office, shall not act as agent, manager or engineer for any operator, or in any way be interested in operating any mine.

Their powers
and duties.

SEC. 292. The chief inspector and district inspectors shall give their whole time and attention to the discharge of their offices, respectively; it shall be the duty of the district inspectors to examine all the mines in their respective districts as often as possible, to see that all the provisions and requirements of this chapter are strictly observed and carried out; they shall particularly examine the workings and machinery belonging to any mine, examine into the condition and condition of the mines as to ventilation, circulation of air, drainage and general security; they shall make a record of all examinations of mines in their respective districts, showing the date when made, the condition in which the mines are found, the extent to which the provisions relating to mines and mining are observed or violated, the progress made in the improvement and security of the mines, the health sought to be secured by the provisions of this chapter, the number of accidents, injuries received, or deaths in the mines, the number of mines in their respective districts, the number of persons employed in or about each mine, together with all such other facts and information of public interest concerning the condition of the mines, the development and progress of mining in their respective districts; they may think useful and proper, which record shall, before the first Monday of every month, be filed in the office of the chief inspector, to be by him recorded, and the same, if thereof as may be of public interest, to be included in the annual report; in case of any controversy or disagreement between the district inspector and the owner and operator of any mine, or the person working therein, or in case of conditions of emergencies requiring counsel, the district inspector may call on the chief inspector for such advice and counsel as may be necessary; should the district inspector find any of the provisions of this chapter violated or not complied with, by any owner, lessee, or agent in charge of any mine, he shall immediately notify such owner or agent in charge, of such neglect or violation, and

e same is, within a reasonable time, rectified, and the provisions of this chapter fully complied with, he shall institute a prosecution under the provisions of section six thousand eight hundred and seventy-one (6871) of the Revised Statutes. The inspectors shall exercise a sound discretion in the enforcement of the provisions of this act, and in any respect (which is not provided against by, or may result from a rigid enforcement of any express provisions of this chapter), the inspector find any matter, thing or practice in or connected with any such mine, to be dangerous or defective, so as, in his opinion, to threaten or tend to cause bodily injury of any person, the inspector may give notice in writing thereof to the owner, agent or manager of the mine, and shall state in such notice the particulars in which he considers such mine, or any part thereof, or any matter, thing or practice to be dangerous or defective, and require the same to be remedied. For the purpose of making the inspection and examination provided for in this section, the chief inspector and the district inspectors shall have the right to enter any mine at all reasonable times, by night or by day, but in such manner as shall not unnecessarily obstruct the working of the mine; and the owner or agent of such mine is hereby required to furnish the means necessary for such entry and inspection; the inspection and examination herein provided for shall extend to fire clay, iron ore and other mines, as well as coal mines.

SEC. 293. The chief inspector shall designate the counties or portions thereof in the State which shall compose the different districts, and may at any time change the same, when in his judgment the best interests of the service may require, and shall issue such instructions, make such rules and regulations for the government of the district inspectors, not inconsistent with the powers and duties vested in them by law, as shall secure uniformity of action and proceedings throughout the different districts; and he may order one district inspector to the assistance of any other district inspector, or make temporary transfers of district inspectors, when, in his judgment, the efficiency or necessity of the service demands or permits, and he may, with the consent of the governor, remove any district inspector at pleasure; the district inspectors are hereby invested with all the powers and authority of county auditors, as sealers of weights and measures in the different counties of this State, and for any service performed as such sealers they shall receive the same compensation as now provided by section ten hundred and sixty-two (1062) of the Revised Statutes; but said inspector shall exercise said authority in connection with weights and measures only at mines in their respective districts; the chief inspector shall render such personal assistance to the district inspectors as they, from time to time, may require, and shall make such personal inspection of the mines as he may deem necessary, and his other duties will permit; he shall keep in his office and carefully preserve all

District, how made and changed.

Rules for district inspectors.

Power of chief over district inspectors.

Their powers as sealers of weights and measures.

Special duties of chief inspector.

His reports.

Mining operators to make certain report to him.

Penalty for their failure to make such reports.

Matters to be included in report of chief inspector.

Maps, plans of mines, etc., shall be kept in offices.

maps, surveys and other reports and papers required by law to be filed with him, and so arrange and preserve the same as shall make them a permanent record of ready, convenient and connected reference; he shall compile and consolidate the reports of district inspectors; and annually make report to the governor of all his proceedings, as well as those of the district inspectors, the condition and operation of the different mines of the State, and the number of mines and the number of persons employed in or about such mines, the amount of coal, iron ore, limestone, fire clay, or other mineral mined in the State; and for the purpose of enabling him to make such report, the owner, lessee or agent in charge of such mine, who is engaged in mining, and the owner, lessee or agent of any firm, company or corporation in charge of any fire clay, or iron ore mined [mine?] or any limestone, or quarry, or who is engaged in mining or producing any mineral whatsoever in this State, shall, on or before the 31st day of January in every year, send to the office of the chief inspector of mines, upon blanks furnished by him, a correct return specifying with respect to the year ending on the preceding 31st day of December, the quantity of coal, iron ore, fire clay, limestone, or other mineral product in such mine or quarry, and the number of persons ordinarily employed in or about such mine, or quarry, below and above ground, distinguishing the persons and labor below ground and above ground. Every owner, lessee or agent of a mine or quarry who fails to comply with this section, or makes and return which to his knowledge is false in any particular, shall be deemed guilty of an offense against this section, and shall be fined one hundred dollars, to be recovered at the suit of the chief inspector in the name of the State of Ohio; he shall also include in such report such facts relative to the mineral resources of the State and the development of the same, as shall, in his judgment, be of public interest; he shall enumerate all accidents, and the manner in which they occurred, in or about the mines, and give all such other information as he thinks useful and proper, and make such suggestions as he deems important, relative to mines and mining, and any other legislation that may be necessary on the subject for the better preservation of the life and health of those engaged in such industry.

SEC. 294. The chief inspector shall have an office in the State House, in which shall be carefully kept the maps and plans of all mines in the State, and all records, correspondence, papers, and apparatus and property pertaining to his duties, belonging to the State, and shall be handed over to his successor in office; the district inspectors shall keep their offices in such place in their respective districts as will be most central and convenient to the mining region of their respective districts, and shall keep and preserve in their offices all maps, plans, surveys, and other papers belonging to their offices, in such manner as

l be of easy access and convenient reference to persons led to examine them. The district inspectors shall receive an annual salary of twelve hundred dollars (\$1,200) annum, and the chief inspector shall receive the same as is now provided for inspector of mines under ion twelve hundred and eighty-four of the Revised tutes.

Salaries.

SEC. 295. There shall be provided for the inspectors ghts and measures and all instruments and chemical tests essary for the discharge of their respective duties under chapter which shall be paid for on the certificate of the f inspector, from his contingent fund, and shall belong he State.

Instruments, etc., to be furnished inspectors.

SEC. 295a. It shall be unlawful for any mine owner, ee or operator of coal mines in this State, employing ers at bushel or ton rates, or other quantity, to pass the put of coal mined by said miners over any screen or other ice which shall take any part from the value thereof, ore the same shall have been weighed and duly credited the employe sending the same to the surface, and acnted for at the legal rate of weights as fixed by laws of io.

Unlawful to screen coal before weighing.

SEC. 295b. The provisions of this act shall also apply he class of workers, engaged in mines wherein the mining lone by machinery, known as loaders; whenever the workn are under contract to load by the bushel, ton or any ntity, the settlement of which is had by weight, the put shall be weighed in accordance with the provisions of s act.

Provisions apply to "loaders."

SEC. 295c. Any mine owner, lessee or operator of coal es in this State, neglecting or refusing to comply with conditions required to be performed by sections 295a l 295b, shall be deemed guilty of a misdemeanor, and upon viction, be fined in any sum not exceeding six hundred 00) dollars, nor less than three hundred (\$300) dollars, the discretion of the court.

Penalty.

SEC. 296. The owner or agent of any mine having an avation of not less than fifteen thousand cubic yards, ill make, or cause to be made, an accurate map or plan of : working of such mine on a scale of not less than two hun- d feet to the inch, showing the area mined or excavated, d the location and connection with such excavation of the ne of the lines of all adjoining lands, and the name or mes of each owner or owners, so far as known, marked on h tract, and the owner or agent shall annually thereafter ke, or cause to be made, an addition to said map, showing : progress and plan of the working of such mine during : previous year up to the date of survey; provided, that d additions shall be made semi-annually whenever the ne inspector deems it necessary and so directs. The map all be kept at the office of such mine, and open to the in- ction of the mine inspector, or his assistants, at all rea- ble times, and at the request of the inspector the owner

Owner of a mine shall furnish a map of his mine, etc.

Inspector to cause maps to be made.

Additions made semi-annually.

Cause maps to be made in duplicate.	<p>or agent shall file a correct copy of such map with said mine inspector at Columbus, and in case of refusal on the part of the owner or agent to make and file such map, the inspector is authorized and required hereby to cause such map or maps to be made in duplicate, at the expense of said owner or agent, the cost of which shall be recoverable against the owner or agent in the name of the State mine inspector; and in case of refusal by said owner or agent to make, or cause such map and the additions thereto to be made, for sixty days after notice by the mine inspector, said agent or owner shall be liable to a fine of five dollars for each and every day until said map is made, which shall be collected in the name of the State of Ohio, at the suit of the State mine inspector, and the amount so recovered shall be paid into the township school fund of the township when collected. And when any mine is exhausted or abandoned, and before the pillars are drawn in any portion of the mine, the owner or agent thereof shall cause to be made a correct map of such mine, showing the area and working of the same to the day of abandoning, or of drawing pillars for the purpose of abandoning, and file such map within ninety days thereafter at the office of the county recorder in the county where such mine is located; said map shall have attached thereto the sworn certificate of the mining engineer making the map, and of the mine boss in charge of the underground workings of said mine; such map shall be properly labeled and filed by the recorder, and be preserved as a part of the records of the land on which such mines are located, and the recorder shall receive for said filing from said owner or agent a fee of fifty cents.</p>
Maps of abandoned mines to be made.	<p>SEC. 297. It is unlawful for the owner or agent of any coal mine, worked by shaft, to employ or permit any person to work therein, unless there are, to every seam of coal worked in each mine, at least two separate outlets, separated by natural strata of not less than one hundred feet in breadth, by which shafts or outlets distinct means of ingress and egress are always available to the persons employed in the mine; but it is not necessary for the two outlets to belong to the same mine if the persons employed therein have safe, ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine while being worked for the purpose of making communication between said two outlets so long as not more than twenty persons are employed at any one time in such mine, neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages, and other means of egress shall at all times be available for the persons employed, where there is no such outlet. The escapement shafts shall be fitted with safe and available appliances, by which the persons employed in the mine may readily escape</p>
Shall have attached sworn certificates.	
Outlets required.	
Not apply to new openings.	
Does not apply unless more than 20 men are employed.	
Cages fitted with safe appliances.	

When an accident occurs deranging the hoisting machinery : main outlets, and such means or appliances for escape always be kept in a safe condition; and in no case an air shaft, with a ventilating furnace at the bottom, instructed to be an escapement shaft, within the meaning of this section. To all other coal mines, whether slopes or drifts, two such openings or outlets must be provided within twelve months after shipments of coal have commenced from such mine; and in case such outlets are not provided as herein stipulated it shall not be lawful for the owner or owner of such slope or drift to permit more than five persons to work therein at any one time. In case a coal mine has but one shaft, slope or drift, for the ingress or egress of the men working therein, and the owner thereof may not own suitable surface ground for another opening, he may select and appropriate any adjoining land for that purpose, and may make an additional shaft or outlet under, through or upon any intervening land, or land adjoining, which shall be governed in his proceeding in appropriating such land by the provisions of law in force, providing for the appropriation of private property by corporations, and such appropriation may be made, whether he is a corporator or not, but no land shall be appropriated, under the provisions of this chapter until the court is satisfied that suitable premises can not be obtained upon reasonable terms.

Slopes and drifts must be provided within twelve months.

When owner does not own suitable ground.

SEC. 208. The owner or agent of every coal mine, whether shaft, slope or drift, shall provide and maintain for such mine an amount of ventilation of not less than ten cubic feet, per minute, per person employed in such mine, which shall be circulated and distributed throughout the mine in such a manner as to dilute, render harmless and remove the poisonous and noxious gases from each and every working place in the mine, and no working place shall be more than sixty feet in advance of a breakthrough, air-way; and all breakthroughs, or air-ways, except those made near the working-faces of the mine, shall be closed and made air-tight, by brattice, trap doors, or otherwise, so that the currents of air in circulation in the mine may not go to the interior of the mine, where the persons employed in such mine are at work, and all mines governed by this statute shall be provided with artificial means of production of ventilation, such as forcing, or suction fans, exhaust furnaces or other contrivances, of such capacity and power as to produce and maintain an abundant supply of air, and all mines generating fire-damp shall be kept free of standing gas and every working place shall be carefully examined every evening with a safety lamp, by a competent person or persons, before any of the workmen are allowed to enter the mine. All underground entrances to any places not in actual course of working or extension shall be properly fenced across the whole width of such entrances so as to prevent persons from inadvertently entering the same.

Ventilation.

Shall not drive working place more than 60 feet in advance of breakthrough.

Working places examined every morning.

Safety apparatus and precautions.

Cover overhead of cages.

Boilers not nearer than 60 feet to any shaft or slope.

Competent engineers must be employed, etc.

Safety lamps the property of mine owner.

Lighting and ventilation.

Main doors shall have an attendant.

SEC. 299. The owner or agent of every coal mine operated by shaft, in all cases where the human voice can not be distinctly heard, shall forthwith provide and maintain a metal tube from the top to the bottom of such shaft, suitably calculated for the free passage of sound therein, so that conversation may be held between persons at the bottom and top of the shaft; there shall also be provided an approved safety-catch, and a sufficient cover overhead, on all carriages used for lowering and hoisting persons, and in the top of every shaft an approved safety-gate, and an adequate brake shall be attached to every drum or machine used for lowering or raising persons in all shafts or slopes; and there shall also be provided in every shaft a traveling or passage way from one side of a shaft bottom to the other, so that persons working therein may not have to pass under descending cages; and all slopes or engine planes, used as traveling ways by persons in any mine, shall be made of sufficient width to permit persons to pass moving cars with safety; but if found impracticable to make any slope or engine plane of sufficient width, then safety holes of ample dimensions, and not more than sixty feet apart, shall be made on one side of said slope or engine plane. Such safety holes shall always be kept free from obstructions, and the roof and sides shall be made secure. The boilers used for generating steam, and the buildings containing the boilers shall not be nearer than sixty feet to any shaft or slope, or to any building or inflammable structure connecting with or surrounding said shaft or slope; but this section shall not apply to any shaft or slope until the work of development and shipment of coal has commenced.

SEC. 300. No owner or agent of any coal mine operated by a shaft or slope shall place in charge of any engine used for lowering into or hoisting out of such mine persons employed therein, any but experienced, competent and sober engineers; and no engineer in charge of such engine shall allow any person, except such as may be deputed for that purpose, by the owner or agent, to interfere with it or any part of the machinery, and no person shall interfere or in any way intimidate the engineer in the discharge of his duties; and in no case shall more than ten men ride on any cage or car at one time, and no person shall ride upon a loaded cage or car in any shaft or slope.

SEC. 301. All safety lamps used for examining coal mines, or which are used in any coal mine, shall be the property of the owner of the mine, and shall be under the charge of the agent thereof, and in all mines, whether they generate fire-damp or not, the doors use [d] in assisting or directing ventilation of the mine, shall be so hung or adjusted that they will shut of their own accord and cannot stand open; and all main doors shall have an attendant, whose constant duty shall be to open them for transportation and travel, and prevent them from standing open longer than is necessary for persons or cars to pass through; and

mining boss shall keep a careful watch over the ventilating apparatus and the air-way, and he shall measure the ventilation at least once a week, at the inlet and outlet, and also at or near the face of all entries, and the measurements of air so made shall be noted on blanks, furnished to the chief inspector; and on the first day of each month the mining boss of each mine shall sign one of such blanks, properly filled with the said actual measurements, and forward the same to the chief inspector, and any mining boss making false returns of such air measurements shall be deemed guilty of an offense against this section. Every person having charge of any mine, whenever loss of life occurs by accident, connected with the working of such mine, or by explosion, shall give notice thereof forthwith by mail or otherwise, to the inspector of mines, and to the coroner of the county in which such mine is situated, and the coroner shall hold an inquest upon the body of the person or persons whose death has been caused, and inquire carefully into the cause thereof, and shall return a copy of the findings and all the testimony to the chief inspector. The owner, agent, or manager of every mine shall, within twenty-four hours next after any accident or explosion, whereby loss of life or personal injury may have been occasioned, send notice in writing to the chief inspector, and shall specify in such notice the character and cause of the accident, and the name or names of the persons killed and injured, with the extent and nature of the injuries sustained. When any personal injury, of which notice is required to be sent under this section, results in the death of the person injured, notice in writing shall be sent to the chief inspector within twenty-four hours after such death comes to the knowledge of the owner, agent or manager; and when loss of life occurs in any mine by explosion, or accident, the owner, agent, or manager of such mine, shall notify the chief inspector, or the district inspector forthwith, of the fact and shall be the duty of the chief inspector to go himself, or to require one of the district inspectors to go, at once to the mine in which said death occurred, and inquire into the cause of the same, and to make a written report, fully setting forth the condition of the part of the mine where such death occurred, and the cause which led to the same; which report shall be filed by the chief inspector in his office as a matter of record, and for future reference.

Mine boss shall measure the air once a week.

Notice of accidents.

Shall give notice to the chief inspector and the coroner.

Coroner shall hold inquest.

Duty of inspectors.

Notice when loss of life occurs.

For any injury to persons or property, occasioned by any violation of this act, or any willful failure to comply with its provisions by any owner, agent or manager of any mine, a right of action shall accrue to the party injured, for any direct damage he may have sustained thereby; and, in any case of loss of life, by reason of such willful neglect or abuse, aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for the recovery of damages for the injury they have sustained.

Penalty.

Right of action to party injured.

Other notices
to be given
chief inspec-
tor of mines.

The owner, agent, or manager of any mine shall also give notice to the chief inspector of mines in any or all of the following cases :

1. Where any change occurs in the name of any mine, or in the name of any owner, agent, or manager of any mine, or in the officers of any incorporated company which owns or operates a mine.

2. Where any working is commenced for the purpose of opening a new shaft, slope or mine, to which this act applies.

3. Where any mine is abandoned or the working thereof discontinued.

4. Where the working of any mine is recommenced after any abandonment of discontinuance for a period exceeding three months.

5. Where the pillars of a mine are about to be removed or robbed.

6. Where a squeeze or crush, or any other cause of change may seem to affect the safety of persons employed in any mine, or where fire occurs, or a dangerous body of gas is found in any mine.

SEC. 302. No child under fifteen years of age shall be allowed to work in any mine, and in all cases of minors applying for work the agent of such mine shall see that the provisions of this section are not violated ; he shall also keep a record of all minors employed by him, or by any person employed in said mine, giving the name, age, place of birth, parents' name and residence, with character of employment, and he shall demand from such minor proof that he has complied with the requirements of the school laws ; and it shall be the duty of the mine inspector to inspect such record and to report to the chief inspector of mines the number of minors employed in or about such mines and to enforce the provisions of this section.

Action for
non-compl-
ance with
statutes.

SEC. 303. In case any coal mines does not, in appliances for the safety of the persons working therein, conform to the provisions of this chapter, or the owner or agent disregards the requirements of this chapter, any court of competent jurisdiction may on application of the inspector, by civil action in the name of the State, enjoin or restrain the owner or agent from working or operating such mine until it is made to conform with the provisions of this chapter ; and such remedy shall be cumulative, and shall not take the place of or affect any other proceedings against such owner or agent authorized by law for the matter complained of in such action.

When gov-
ernor shall
convene a
board of ex-
aminers.

SEC. 304. When written charges of gross neglect of duty or malfeasance in office against any inspector is made and filed with the governor, signed by not less than five coal miners or one or more operators of mines, together with a bond in the sum of five hundred dollars, payable to the State, and signed by two or more responsible freeholders and conditioned for the payment of all costs and expenses

ising from the investigation of such charges, the governor shall convene a board of examiners, to consist of two practical coal miners, one chemist, one mining engineer, and one examiner, at such time and place as he deems best, giving ten days' notice to the inspector against whom the charges are made, and also the person whose name appears first in the charges; and the board when so convened, and having been first duly sworn, truly to try and decide the charges made, shall summon any witnesses so desired by either party, and examine them on oath, which may be administered by any member of the board, and depositions may be read on such examination, as in other cases; and the board shall examine fully into the truth of such charges, and report the result of their investigation to the governor; and the board shall award the costs and expenses of such investigation against the inspectors or the persons signing the bond according to their finding, against said inspector or in his favor, which costs and expenses shall include the compensation of such board, of five dollars per day for each member, for the time occupied in the trial and in traveling from and to their homes; and the attorney general shall forthwith proceed to collect such costs and expenses, and pay the same into the State treasury, being in the first instance paid out of the State treasury on the certificate of the president of such board.

Duties of the board.

SEC. 305. In all coal mines in the State the miners employed and working therein, the owners of the land or other persons interested in the rental or royalty of any such mine, shall at all proper times have full right of access and examination of all scales, machinery or apparatus used in or about such mine to determine the quantity of coal mined, for the purpose of testing the accuracy and correctness of all such scales, machinery or apparatus; and such miners, landowners or other persons may designate or appoint a competent person to act for them, who shall at all proper times have full right of access and examination of such scales, machinery or apparatus, and sealing all weights and measures of coal mined, and the accounts kept of the same; but no more than one person on behalf of the miners collectively, or one person on behalf of the landowners or other persons interested in the rental or royalty jointly, shall have such right of access, examination and inspection of scales, weights, measures and accounts at the same time, and that such person shall make no unnecessary interference with the use of such scales, machinery or apparatus; and the miners employed in any mine may, from time to time, appoint two of their number to act as a committee to inspect, not oftener than once in every month, the mine and the machinery connected therewith, and to measure the ventilating current, and if the owner, agent or manager so desires, he may accompany said committee by himself or two or more persons which he may appoint for that purpose; the owner, agent or manager shall afford every necessary facility for making such inspection and measurement, but the com-

Right of access to mines, etc.

Right to test the accuracy of the scales.

Miners to appoint a committee to inspect mine and machinery, etc.

Committee to
report to the
inspector.

mittee shall not in any way interrupt or impede the work going on in the mine at the time of such inspection and measurement, and said committee shall, within ten days after such inspection and measurement, make a correct report thereof to the inspector of mines, on blanks to be furnished by said inspector for that purpose; and if such committee make to the inspector a false or untrue report of the mines, such act shall constitute a violation of this section.

SEC. 306. Only a pure animal or vegetable oil, or other oil as free from smoke as a pure animal or vegetable oil, and not the product or by-product of rosin, and which shall, on inspection, comply with the following test, shall be used for illuminating purposes in the mines of this State: All such oil must be tested at sixty degrees Fahrenheit. The specific gravity of the oil must not exceed twenty-four degrees Tagliabue. The test of oil must be made in a glass jar one and five-tenths inches in diameter by seven inches in depth. If the oil to be tested is below forty-five degrees Fahrenheit in temperature, it must be heated until it reaches about eighty degrees Fahrenheit; and should the oil be above forty-five degrees and below sixty degrees Fahrenheit it must be raised to a temperature of about seventy degrees Fahrenheit, when, after being well shaken, it should be allowed to cool gradually to a temperature of sixty degrees Fahrenheit, before finally being tested. In testing the gravity of the oil, the Tagliabue hydrometer must be, when possible, read from below, and the last line which appears under the surface of the oil shall be regarded as the true reading. In case the oil under test should be opaque or turbid, one-half of the capillary attraction shall be deemed and taken to be the true reading. Where the oil is tested under difficult circumstances, an allowance of one-half degree may be made for possible error in parallax before condemning the oil for use in the mine. All oil sold to be used for illuminating purposes in the mines of this State, shall be contained in barrels or packages branded conspicuously with the name of the dealer, the specific gravity of the oil, and the date of shipment.

SECTION 2. That section 306 be supplemented by the enactment of the following section, numbered as indicated:

SEC. 306a. Any person or persons, firm or corporation, which ships any oil contained in any barrel or barrels, package or packages, which are not branded as prescribed in section 306, said oil to be used for illuminating purposes in coal or any other mines, and any person or persons, firm or corporation which sells any oil other than that prescribed in section 306, to be used for illuminating purposes in coal or other mines, and any person or persons, firm or corporation, having in charge the operation or running of any mine which, in a mine under his or its charge uses or permits the use of any oil other than that prescribed in section 306, a miner or mine employe who uses, with a knowledge of its character, in any mine in this State, any oil other than that prescribed in section 306, shall be fined not less than five

more than fifty dollars; and any individual, firm, company or corporation which sells any oil other than that described in section 306, in a quantity exceeding five barrels per barrel of oil, to be used for illuminating purposes, in coal or iron mines, shall be fined not less than twenty-five nor more than one hundred dollars. Mayors and justices of the peace shall have jurisdiction to try any violations of this section, and their judgment shall be final. Every person who, after having once been convicted of violating this section, shall be convicted of again violating any of the provisions of this section, shall, in addition to the fine before provided, be imprisoned not less than ten days nor more than thirty days. On conviction, before a mayor or justice of the peace, of a second violation of this act involving the punishment of imprisonment, if a trial by jury be not waived, a jury shall be summoned and the case tried, after the manner provided in section 3718a of the Revised Statutes. All fines assessed and collected under prosecutions begun, or caused to be begun, by the chief inspector of mines, or any district inspector of mines, shall be paid by the court to the chief inspector of mines, and by him paid into the State treasury to the credit of a fund which is hereby appropriated for the use of the chief inspector of mines in prosecuting violations of this section. Any excess of fines collected over the expenses incurred in prosecutions under this section remaining at the close of the fiscal year, shall be credited to the general revenue fund of the State.

SECTION 3. Section 306, as amended March 29, 1892, (O. L., 164), is hereby repealed, and this act shall take effect and be in force from and after its passage.

SEC. 6871. Whoever knowingly violates any of the provisions of sections two hundred and ninety-seven, two hundred and ninety-eight, two hundred and ninety-nine, two hundred and one, three hundred and one, three hundred and two, and three hundred and five, or does any act whereby the life or health of the persons, or the security of any mine or machinery are endangered; or any miner or other person employed in any mine governed by this statute, who intentionally and willfully neglects or refuses to securely prop the roof of any working place under his control; or neglects or refuses to obey any order given by the superintendent of the mine in relation to the security of the mine in the part of the roof where he is at work, or for fifteen feet back from the face of his working place; or any miner, workman, or other person who shall knowingly injure any water-gauge, barometer, air-course or brattice, or shall obstruct or throw down any air-ways, or shall handle or disturb any part of the machinery of the hoisting engine, or open a door of the mine which shall not have the same closed again, whereby danger is produced either to the mine or those that work therein; or who shall enter any part of the mine against caution; or who shall disobey any order given in pursuance of this act; or who shall commit any wilful act, whereby the lives and health of persons

Mines; penalty for injuring.

Penalty for neglecting to securely prop the roof.

Penalty for disturbing machinery.

To supply
timber.

county jail not more than thirty days, or both. The agent, or operator of every coal mine shall keep a supply of timber constantly on hand, and shall deliver the same at the working place of the miner, and no miner shall be held responsible for accidents which may occur in mines where the provisions of this section have not been complied with by the owner, agent, or operator thereof.

AN ACT

For regulating the weighing of coal at the mine where mined.

Weighing of
coal; oath of
weighmaster.

Bond of land-
owner.

SECTION 1. Be it enacted by the general assembly of the State of Ohio, That whoever shall be employed to mine coal as it comes from the mine where mined, whether by weight or by measure, shall be the weight upon which the amount of royalty due for the person mining such coal shall be estimated, and the weight upon which the royalty due the owner of the lands from which such coal shall be mined, shall be estimated at any mine where ten or more miners are employed, shall take and subscribe an oath before a competent officer to administer such oath, that he will correctly weigh all coal taken from such mine under contracts between operator, miner and land owner, and will give due credit for the same to the miner mining such coal in said mine, and the land owner when required, shall enter into bond in the sum of three hundred dollars, with two sufficient sureties and payable to the State of Ohio, said bond to be approved by and filed with the township clerk.

days nor more than sixty days, or both, at the discretion of the court.

SEC. 4. This act shall take effect and be in force from and after September 1, 1898.

When act
takes effect.

Passed April 21, 1898.

AN ACT

Supplementary to section 3184 of the Revised Statutes, as amended March 22, 1891, to be sectionally numbered 3184a.

SEC. 318a. Any person who performs labor in mining coal, or removing the same from the mines, or other manual labor connected therewith, for any coal or mining company owning, operating or leasing coal mines within this State, by virtue of a contract with the owner, owners, or his or their authorized agent, shall have a lien to secure the payment for the same upon the mine or mines of such company and upon all the rights of the company or corporation owning or leasing such mines, and upon all the personal property of any such company or corporation used in conducting their business of mining coal, whether the same be located at or near the mines or elsewhere.

Lien upon
mines for
labor.

Passed March 27, 1889.

AN ACT

"To permit mine and quarry operators to cross roads," passed February 17, 1893.

SECTION 1. That any individual, partnership or corporation in Ohio, who may now or hereafter own any land or any interest either in fee or otherwise, containing any coal, clay or stone, and over any portion of which shall pass any State, county or township road or public highway, with the consent of the board of county commissioners in case of State or county roads, or township trustees in case of township roads, shall have and are hereby authorized to excavate, mine, quarry through or under any such road; provided, however, that before said work shall be commenced, said individual, partnership or corporation shall execute and deliver to the board of county commissioners of any such county, a bond with good and sufficient surety, in such an amount as shall be by said board considered sufficient to cover all damages that may accrue by reason of excavating, mining or quarrying through or under any such road, the same to be approved by said board; conditioned that while crossing over or mining or quarrying under any such road, a safe and unobstructed passage way or road shall be kept open by such individual, partnership or corporation for pub-

Conditions
upon which
mine and
quarry opera-
tors permitted
to undermine
or cross public
roads.

lic use, and as soon as practicable the said road shall be fully restored to its original safe and passable condition.

How owner of land adjoining mine may enter and examine same.

SEC. 4374. A person owning land adjoining a mine worked for the production of coal, ore, or other mineral substance, or a person having an interest in such mine, having reason to believe that the protection of his interest in the mine, or in like minerals on his adjoining land, requires it, upon making affidavit to that effect before a justice of the peace or other proper officer, may enter such mine, and have an examination or survey made thereof; but such examination or survey shall not be made until one day's notice thereof is given to the parties in interest, nor at unreasonable times, but in such time and in such manner as will least interfere with the working of the mine, if the same is being operated at the time.

Facilities for such examination.

SEC. 4375. When the affidavit has been made and notice given, the person in charge of the mine shall, on the application of the party giving the notice, transport, by the ordinary method in use at such mine for entrance and exit, a surveying party of not more than five persons, furnish to such party a competent guide and supply them with approved safety lamps; and for every person so transported, he shall be entitled to receive, from the person requesting such survey, the sum of fifty cents, unless the shaft exceeds two hundred and fifty feet in depth, when he shall be entitled to the sum of one dollar for each person, and five dollars per day for the guide.

Damages sustained by such examination.

SEC. 4376. If the parties working or occupying such mine sustain any damage, for which compensation should be made, by reason of such examination or survey having been made at unreasonable times, or in an improper or unwarrantable manner, the person making the same, or causing the same to be made, shall be liable therefor.

Penalty for hindering such examination.

SEC. 4377. The parties working or occupying such mine shall not hinder or obstruct the examination or survey, when made at a reasonable time and in a reasonable manner, under a penalty of not less than fifty nor more than five hundred dollars for each offense, to be recovered before a court of competent jurisdiction.

Action for refusal to permit examination.

SEC. 4378. The party who makes the application for the survey may, upon the refusal of the owner or person in charge of the mine to comply with the foregoing provisions, recover judgment, as upon default, in a court of competent jurisdiction, against the owner of such mine, in such sum as such party may declare under oath he believes to be justly due him for coal or other mineral belonging to him taken by the owner of such mine without his permission and the statute of limitations shall not be operative against such claim; but the demand and refusal to enter such mine shall be first proven to the satisfaction of the court or jury, and the refusal of the person in charge of the mine shall be held to be the refusal of the owner.

SEC. 4379. The provisions of this chapter shall be available to any person who, on his oath, states that he is the owner or authorized agent of any owner of land which he believes contains coal or other valuable mineral substance within one mile of such shaft, although it does not adjoin any mine of the owner of such shaft; the affidavit required shall be sufficient if it state the lands in which the affiant is interested are in the vicinity of such shaft, and not more than one mile distant therefrom; and service upon any owner or superintendent of such shaft shall be sufficient.

To whom provisions concerning examination available.

OIL LAW AS AMENDED.

AN ACT

To amend sections 306-1, 306-2, 306-3, 306-4 and 306-5, and to repeal sections 306-5a, 306-5b, 306-5c, 306-5d, 306-5e, and 306-6 of the Revised Statutes of Ohio.

Be it enacted by the General Assembly of the State of Ohio:

SECTION 1. That sections 306-1, 306-2, 306-3, 306-4, and 306-5 of the Revised Statutes of Ohio be amended so as to read as follows.

Inspector of mines.

SEC. 306-1. It shall be the duty of every person, firm or corporation engaged in drilling or exploring for natural gas or oil upon any land from which coal is being mined upon notice from the chief inspector of mines of the State of Ohio, or from any district inspector of mines of said State, to make or cause to be made, an accurate map thereof, which shall show the boundaries of each tract of land drilled upon, and the buildings and all monuments found upon such premises. Each well shall be plainly marked by a name, number or letter, and located whenever possible with reference to some well defined and lasting monument, so that its exact location may be determined. Such map shall contain a sworn statement of the person, firm or corporation operating such oil or gas wells, that it is a true and accurate representation of the property; and a copy thereof shall be filed in the office of the chief inspector of mines and be open to inspection at all reasonable times.

Maps of coal, gas and oil lands required to be made; when.

Wells to be plainly marked.

Copy to be filed with inspector of mines.

SEC. 306-2. It shall be the duty of every person, firm or corporation leasing any land for coal mining purposes, and upon which gas or oil wells have been drilled to, or below any veins or seams of such mineral coal before proceeding to mine such coal to make, or cause to be made, and filed in the office of the chief inspector of mines such a map as is described in section 306-1 of the Revised Statutes of Ohio.

Maps to be made before beginning operations.

SEC. 306-3. Whenever any person, firm or corporation sinks any well for gas or oil on lands upon which coal or

Casing and sealing of well drilled in coal

or other mineral lands.

other mineral is being mined, and which well passes through any mine, it shall be the duty of the person drilling such well to drill the hole to a depth of at least ten feet below the vein of coal or other mineral being mined, when such hole shall be cased and sealed upon the outside of the casing, with suitable material to the level of the coal floor; and each vein of mineral coal being mined, pierced by such well shall be sealed in the same manner.

Sealing of well on abandonment.

Sec. 306-4. It shall be the duty of the owner of any well drilled for oil or gas and which in drilling shall have passed through any vein of mineral coal, before abandoning, or ceasing to operate such well, and before drawing the casing therefrom, to seal the same in the manner following: There shall be driven in such well to a depth of at least ten feet below the floor of the lowest coal measure a round seasoned wooden plug at least three feet in length and equal in diameter to the diameter of the well at that point, on the top of which plug there shall be filled at least seven feet of sediment or drilling, or cement and sand. Where any gas or oil well passes through any gas or oil bearing rock lying above the coal measure, the owner of said well or his agent, shall, upon abandoning or ceasing to operate such well, drive a dry wooden plug not less than two feet in length, equal in diameter to the diameter of the hole, to a point as near as possible to the top of the coal vein, on the top of which plug there shall be filled at least five feet of sediment or drillings, or cement and sand, as the mine inspector shall direct.

Failure of owner to cause well to be sealed.

In case such well is not plugged as aforesaid within ten days from the abandonment thereof, the chief inspector of mines, or a district inspector of mines, may cause the well to be plugged, and the costs and expenses of such plugging may be recovered of the person, firm or corporation whose duty it is to plug the same in the manner provided for the recovery of penalties by section 303-5 of the Revised Statutes of Ohio.

Penalty for non-compliance, etc.

Sec. 306-5. Every person, firm or corporation, failing to comply with any of the provisions of this act, shall be subject to a penalty of not less than one hundred dollars, nor more than two hundred dollars, to be recovered by action in the name of the State, and on collection, paid into the treasury of the State to the credit of a fund which is hereby appropriated for prosecuting violations of this act, to be paid out on requisition signed by the chief inspector of mines. Such action may be instituted in the court of common pleas of the county wherein any such well is located, or of Franklin county. In addition to the penalties herein provided, any person violating the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction, be fined in any sum not less than fifty dollars nor more than two hundred, or be imprisoned not less than ten days nor more than thirty days, or both.

SECTION 2. Said original sections 306-1, 306-2, 306-3, 306-4, 306-5, 306-5a, 306-5b, 306-5c, 306-5d, 306-5e, 306-6 of the Revised Statutes of Ohio be and the same are hereby repealed, and this act shall take effect and be in force from after its passage. Repeals, etc.

W. S. MCKINNON,
Speaker of the House of Representatives.
CARL L. NIPPERT,
President of the Senate.

Passed April 3, 1902.

81G

AN ACT

provide against the payment of wages in scrip, orders, etc., and against selling goods or supplies to employes at excessive prices.

SEC. 7015. It shall be unlawful for any person, firm, company, or corporation to sell, give, deliver, or in any manner issue, directly or indirectly, to any person employed by it or it, in payment of wages due for labor, or as advances the wages of labor not due, any script, token, draft, check, or other evidence of indebtedness payable or redeemable otherwise than in money; any violations of the provisions of this section shall be punishable by a fine not less than twenty-five nor more than one hundred dollars, or imprisonment of not more than thirty days, or both; and the amount of any scrip, token, check, draft, order, or other evidence of indebtedness, sold, given, delivered, or in any manner issued, in violation of the provisions of this section, shall be recovered in money at the suit of any holder thereof, against the person, firm, company, or corporation selling, giving, delivering, or in any manner issuing the same; and any scrip, token, check, draft, order, or any other evidence of indebtedness issued in violation of the provisions of this section, and presented by the holder thereof, shall be taken as prima facie evidence in any court of the guilt or indebtedness of any person, firm, company or corporation selling, giving, delivering, or in any manner issuing the same, and for the purpose of this act, in case of a firm or corporation, the person selling, giving, delivering, or in any manner issuing said scrip, token, check, draft, order or other evidence of indebtedness shall be the defendant to the criminal action, and the firm, company or corporation shall be held as the defendant in the civil action. Nothing in this section shall apply or affect the right of any person, firm, company or corporation in giving orders on any store or business house, or firm the business or profits of which he has no interest, directly or indirectly.

SEC. 7016. Whoever compels, or in any manner seeks to compel, or attempts to coerce an employe of any person, firm, or corporation to purchase goods or supplies from any

particular person, firm or corporation, shall be fined not more than one hundred nor less than twenty dollars, or imprisoned not more than sixty days, or both; and whoever sells goods or supplies of any kind, directly or indirectly, to his employe, or pays the wages of labor of his employes in goods or supplies of any kind, directly, or through the invention of scrip, order, or other evidence of indebtedness, at higher prices than the reasonable or current market value in cash of such goods or supplies, shall be liable to like punishment and penalties above specified, and shall in addition thereto, be liable in civil action to the party aggrieved, in double the amount of any charges made for such goods or supplies in excess of the reasonable or current market value in cash, of such goods or supplies.

SEC. 7017. The prosecuting attorney of any county, upon complaint made to him of any violation of either of the two preceding sections within his county, shall cause such complaint to be investigated before the grand jury.

AN ACT

To amend "an act to secure prompt payment of wages of certain employes twice in each month," passed March 21, 1887, (vol. 84, page 214).

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the above recited act be so amended as to read as follows:

Payment of
wages of cer-
tain employes
twice a month.

SEC. 1. That every incorporated manufacturing, mining, mercantile, street-railroad, telegraph, telephone, express, water company, and construction companies, or contractors building railroads, shall pay, in lawful money, or by check, draft or order, payable in lawful money, at sight or on demand, on a bank located at a distance not greater than eight miles from the place where said labor was performed, twice in each month, each and every employe engaged in its business, the wages earned by such employe to within ten days of the date of said payment; provided, however, that if at any time of payment any employe shall be absent from his regular place of labor, he shall be entitled to said payment at any time thereafter, during their regular business hours, upon demand; and provided, further, that said employer may retain at each payment, any amount said employer may order withheld from his or her wages for rent, powder, tools, tool sharpening, or oil due said employer.

Retention of
certain
amounts.

[Section 2, as mended March 27, 1889.]

SEC. 2. Any corporation mentioned in section 1 of this act, violating any provisions of this act, shall be punished by a fine not exceeding one hundred nor less than fifty dollars. Justices of the peace, mayors and police judges shall have final jurisdiction in all cases arising under the

provisions of this act; and a corporation shall be notified by warrant to be served upon the president, secretary, treasurer, or managing agent thereof; provided, that the defendant shall be entitled, on demand, to a trial by jury. If such prosecution be before a justice of the peace, and a trial by jury be not waived, the said justice shall issue a venire to any constable of the county, containing the names of sixteen electors of the county, to serve as jurors to try such case, and make due return thereof. Each party shall be entitled to two peremptory challenges, and shall be subject to the same challenges as jurors are subject to in criminal cases in the court of common pleas. If the venire of sixteen names be exhausted without obtaining the required number to fill the panel, the justice may direct the constable to summon any of the bystanders to act as jurors; but costs shall not be required to be advanced or paid by a person or an officer authorized or required by statute to prosecute such cases; and if the defendant be acquitted, or if he be convicted, and committed to jail in default of payment of fine and costs, the justice, mayor, or police judge, before whom the case was brought, shall certify such costs to the county auditor, who shall examine, and, if necessary, correct the account, and issue his warrant to the county treasurer in favor of the respective officers to whom costs are due for the amount due to each; provided, complaint for such violation is made within thirty days from the date thereof; providing that in pursuance of and under this act there shall not be more than one conviction of the same corporation during any two weeks. And it shall be the duty of the inspector of shops and factories, on complaint of three or more employes of such corporation to enforce the provisions of this act.

AN ACT

To authorize the creation and to provide for the operation of tribunals of voluntary arbitration to adjust industrial disputes between employers and employed.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the court of common pleas of each county, or judge thereof in vacation, shall have the power, and upon the presentation of the petition, or of the agreement hereinafter named, it shall be the duty of said court, or a judge thereof in vacation, to issue, in the form hereinafter named, a license or authority for the establishment within and for each county of tribunals for voluntary arbitration and settlement of trade disputes between employers and employed in the manufacturing, mechanical, or mining industries.

SEC. 2. That said petition or agreement shall be substantially in the form hereinafter given, and the petitions shall be signed by at least forty persons employed as work-

men and by four or more separate firms, individuals or corporations within the county, or by at least four employers, each of whom shall employ at least ten workmen, or by the representative of a firm, corporation, or individual employing not less than forty men in their trade or industry; provided, that at the time the petition is presented, the judge before whom said petition is presented, may, upon motion, require testimony to be taken as to the representative character of said petitioners, and if it appears that the said petitioners do not represent the will of a majority, or at least one-half of each party to the dispute, the license for the establishment of the said tribunal may be denied, or may make such other order in this behalf, as to him shall seem fair to both sides.

SEC. 3. If the said petition shall be signed by the requisite number of both employers and workmen, and be in proper form and contain the names of the persons to compose the tribunal, being an equal number of employers and workmen, the judge shall forthwith cause to be issued a license substantially in the form hereinafter given, authorizing the existence of such tribunal and fixing the time and place of the first meeting thereof, and an entry of the license so granted shall be made upon the journal of the court of common pleas of the county in which the petition originated.

SEC. 4. Said tribunal shall continue in existence for one year from the date of the license creating it, and may take jurisdiction of any dispute between employers and workmen, in any mechanical, manufacturing, or mining industry or business, who shall have petitioned for the tribunal, or have been represented in the petition therefor, or who may submit their disputes in writing to such tribunal for decision. Vacancies occurring in the membership of the tribunal shall be filled by the judge or court that licensed said tribunal, from three names presented by the members of the tribunal remaining of that class in which the vacancies occur. The removal of any member to an adjoining county shall not cause a vacancy in either the tribunal or the post of umpire. Disputes occurring in one county may be referred to a tribunal already existing in an adjoining county.

The place of umpire in any of said tribunals and vacancies occurring in such place, shall only be filled by the mutual choice of the whole of the representatives of both employers and workmen constituting the tribunal, immediately upon the organization of the same. The umpire shall be called upon to act after disagreement is manifested in the tribunal by failure during three meetings held and full discussion had. His award shall be final and conclusive upon such matters only as are submitted to him in writing and signed by the whole of the members of the tribunal, or by parties submitting the same.

SEC. 5. The said tribunal shall consist of not less than two employers or their representatives and two workmen. The exact number which shall in each case constitute the

tribunal shall be inserted in the petition or agreement, and they shall be named in the license issued. The said tribunal, when convened, shall be organized by the selection of one of their number as chairman and one as secretary, who shall be chosen by a majority of the members, or if such majority cannot be had after two votes then by secret ballot, or by lot, as they prefer.

SEC. 6. The members of the tribunal shall receive no compensation for their services from the city or county, but the expenses of the tribunal, other than fuel, light, and the use of the room and furniture, may be paid by voluntary subscription, which the tribunal is authorized to receive and expend for such purposes. The sessions of such tribunal shall be held at the county seat of the county where the petition for the same was presented, and a room in the courthouse for the use of said tribunal shall be provided by the county commissioners.

SEC. 7. When no umpire is acting, the chairman of the tribunal shall have power to administer oaths to all witnesses who may be produced, and a majority of said tribunal may provide for the examination and investigation of books, documents and accounts pertaining to the matters in hearing before the tribunal, and belonging to either party to the dispute; provided, that the tribunal may unanimously direct that instead of producing books, papers and accounts before the tribunal an accountant, agreed upon by the entire tribunal, may be appointed to examine such books, papers and accounts, and such accountant shall be sworn to well and truly examine such books, documents and accounts, as may be presented to him, and to report the results of such examination in writing to said tribunal. Before such examination the information desired and required by the tribunal shall be plainly stated in writing and presented to said accountant, which statement shall be signed by the members of said tribunal, or by a majority of each class thereof. Attorneys at law or other agents of either party to the dispute shall not be permitted to appear or take part in any of the proceedings before the tribunal, or before the umpire.

SEC. 8. When the umpire is acting he shall preside, and he shall have all the powers of the chairman of the tribunal; and his determination upon all questions of evidence, or other questions, in conducting the inquiries then pending shall be final. Committees of the tribunal, consisting of an equal number of each class, may be constituted to examine into any question in dispute between employers and workmen which may have been referred to said committee by the tribunal, and such committee may hear and settle the same finally, when it can be done, by a unanimous vote, otherwise the same shall be reported to the full tribunal, and be there heard, as if the question had not been referred. The said tribunal, in connection with the umpire, shall have power to make, ordain and enforce rules for the government of the body when in session, to enable the busi-

ness to proceed with in order, and to fix its sessions and adjournments; but such rules shall not conflict with this statute, nor with any of the provisions of the constitution and laws of Ohio.

SEC. 9. Before the umpire shall proceed to act, the question or questions in dispute shall be plainly defined in writing, and signed by the members of the tribunal, or a majority thereof of each class, or by the parties submitting the same; and such writing shall contain the submission of the decision thereof to the umpire by name, and shall provide that his decision thereon, after hearing, shall be final. The umpire shall be sworn to impartially decide all questions that may be submitted to him during his term of office. The submission and his award may be made in the form hereinafter given, and said umpire must make his award within ten days from the time the question or questions in dispute are submitted to him. Said award shall be made to the tribunal; and if the award is for a specific sum of money, said award may be made a matter of record by filing a copy thereof in the court of common pleas of the county wherein the tribunal is in session. When so entered of record it shall be final and conclusive, and the proper court may, on motion of any one interested, enter judgment thereon; and when the award is for a specific sum of money, may issue final and other process to enforce the same.

SEC. 10. The form of the joint petition or agreement praying for a tribunal under this act shall be as follows:

To the Court of Common Pleas of _____ County (or to a judge thereof, as the case may be).

The subscribers hereto, being the number and having the qualifications required in this proceeding, being desirous of establishing a tribunal of voluntary arbitration for the settlement of disputes in the _____ (here name the branch of industry) trade, and having agreed upon A, B, C, D and E, representing the employers, and G, H, I, J and K, representing the workmen, as members of said tribunal, who each are qualified to act thereon, pray that a license for a tribunal in the _____ trade may be issued to said persons named above.

Employers.	Names.	Residence.	Works.	No. of employes.

Employees.	Name.	Residence.	By whom employed.

SEC. 11. The license to be issued upon such petition may be as follows:

State of Ohio. }
 County. } ss:

WHEREAS. The joint petition and agreement of four employers (or representatives of a firm, corporation or individual employing forty men, as the case may be), and forty workmen has been presented to this court (or if to a judge vacation so state), praying the creation of a tribunal of voluntary arbitration for the settlement of disputes in the ——— trade within this county, and naming A, B, C, D and E, representing the employers, and G, H, I, J and K, representing the workmen. Now, in pursuance of the statutes for such case made and provided, said named persons do hereby license and authorize to be and exist as a tribunal of voluntary arbitration for the settlement of disputes between employers and workmen for the period of one year from this date, and they shall meet and organize on the ——— day of ———, A. D. —, at ———.

Signed this ——— day of ———, A. D. —.

——— Clerk of the Court of Common Pleas ——— County.

SEC. 12. When the tribunal agrees to submit a matter in controversy to the umpire, it may be in form as follows:

We, A, B, C, D and E, representing employers, and H, I, J and K, representing workmen, composing a tribunal of voluntary arbitration, hereby submit and refer to the umpirage of L. (the umpire of the tribunal of the ——— trade), the following subject-matter, namely: [Here state fully and clearly the matter submitted.] And we hereby agree that his decision and determination upon the same shall be binding upon us, and final and conclusive upon all question thus submitted; and we pledge ourselves to abide and carry out the decision of the umpire when made.

Witness our name this ——— day of ———, A. D. —.

[Signatures.]

SEC. 13. The umpire shall make his award in writing to the tribunal, stating distinctly his decision on the subject-matter submitted. And when the award is for a specific

sum of money, the umpire shall forward a copy of the to the clerk of the proper court.

AN ACT

To establish a school of mines and mine engineering in the Agricultural and Mechanical College.

Ohio State University, establishment of a school of mines.

Course of study; school apparatus, etc.

Employment and duties of instructors.

Cabinet of specimens to be kept.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the trustees of the Ohio State University be and they are hereby required to establish in the university, a school of mines and mine engineering, in which shall be provided the means for studying scientifically and experimentally the survey, opening, ventilation, care and working of mines; and said school shall be provided with a collection of drawings, illustrating the manner of opening, working and ventilating mines and with the necessary instruments for surveying, measuring air, examining and testing the noxious and poisonous gases of mines, and (to) with (the) models of the most improved machinery for ventilating and operating (all the various kinds of) mines, for the safety to the lives and health of those engaged. Said school shall also be provided with complete mining laboratory for the analysis of coals, ores, fire-clays and other minerals and with all the necessary apparatus for testing the various coals, ores, fire-clays, oils, gases, and other minerals.

SEC. 2. Said trustees shall employ competent persons to give instruction in the most improved (and) successful methods of opening, (and operating) surveying and inspecting mines, including the methods and machinery employed for extracting coal, ore, fire-clay, oil, gas and other minerals from the pit's mouth and for facilitating the ascent and descent of workmen, the draining and freeing of mines from water, the causes of the vitiation of air, the quantities of air required under various circumstances, natural ventilation, mechanical ventilation by flues and fans, and of ventilating machinery, the use of air engines, air compressors and coal cutting machinery; also instruction in the various uses of coals, ores, fire-clays, oils, gases and other minerals, and the methods of testing, analyzing and assaying such minerals; also the methods employed in metallurgy and other processes in the reduction of ores and in determining the qualities of metals, particularly iron and steel shown by practical and laboratory tests; and there shall be kept in a cabinet properly arranged for ready reference and examination suitably connected with said school a cabinet of mines (samples of the) specimens from the various mines in the State, which may be sent for analysis, together with the names of the mines and their localities in the county from which they were sent, and the analysis and a statement of their properties attached; it shall also be his duty to furnish analysis of all minerals found in the State and send him for that purpose by residents of this State.

SEC. 3. There is hereby appropriated out of the general revenue fund the sum of three thousand, five hundred dollars (\$3,500), to be expended in the equipment, support and maintenance of said school of mines, as provided for in the first and second sections of this act.

Appropriation.

AN ACT

to amend section 1 of an act entitled "An act to compel children under fourteen years of age to attend school a certain length of time each year," of the Revised Statutes of Ohio, passed April 25, 1890.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That section 1 of an act entitled "An act to compel children under fourteen years of age to attend school at certain lengths of time each year," of the Revised Statutes of Ohio, passed April 25, 1890, be amended so as to read as follows:

Children between eight and fourteen years compelled to attend school.

SEC. 1. That all parents, guardians and other persons who have care of children shall instruct them, or cause them to be instructed, in reading, spelling, writing, English grammar, geography and arithmetic, and every parent, guardian, or other persons having control and charge of any child between the ages of eight and fourteen years, shall be required to send any such child or children to a public or private school for a period of not less than twenty weeks in city districts, in each school year, commencing September ten weeks of which, at least, shall be consecutive, which shall commence within the first four weeks of the first term of the school year; and in special, village and township districts, not less than sixteen weeks in each school year, eight of which shall be consecutive, unless such child or children be excused from such attendance by the superintendent of the public, private or parochial schools in cities, or by authority of the board of education in village, special and township districts, when it shall have been shown to the satisfaction of said superintendent, or said board, that the physical or mental condition of such child or children has been such as to prevent his, her or their attendance at school, or that said child or children are taught at home by some qualified person or persons in such branches as are usually taught in primary schools; and in case the said board or superintendent refuses to grant such excuse from attendance, the parent or guardian of such child or children shall have the right to appeal from the decision of the board to the probate court of the county, on giving bond, within ten days after such decision, to the approval of said court, to pay all costs made therein, and the decision of said court in the matter shall be final; provided, that all youths between eight and sixteen years of age, not engaged in some regular employment, shall attend school for the full term the schools of the district in which

they reside are continued in the school year, unless excused for the reasons named in this section, and if the parents or guardians having legal charge of such youth shall fail to send these youth to school regularly for said full term, or said youth shall absent themselves from school without satisfactory excuse, said parents and guardians and said youth shall be subject to the provisions and penalties of section 8 of this act.

Unlawful to employ children under fourteen years except under certain conditions.

SEC. 2. That no child under the age of fourteen years shall be employed by any person, company or corporation during the school term, and while the public schools are in session, unless the parent, guardian, or other person having care of such child, shall be able to give substantial proof that he or she has fully complied with the requirements of section 1 of this act, or that such child has completed the usual course of primary and grammar grades in some public or private school, and such person, company or corporation shall demand such proof before giving employment to any minor, and shall make a record of said proof given, and shall be required, upon the request of the officer (hereinafter provided for) to allow said officer to examine the said record, and also the record as provided for in section 6986aa of the Revised Statutes, and any person, company or corporation employing any child contrary to the provisions of this act shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action for debt in any court, or before any justice of the peace having jurisdiction, and such action shall be brought in the name of the clerk of the board of education.

Regarding minors over fourteen and under sixteen who cannot read and write English.

SEC. 3. That all minors over the age of fourteen, and under sixteen years, who cannot read or write the English language, shall be required to attend school at least one-half of each day, or to attend some evening school organized and maintained by the board of education, or to take regular private instruction from some person qualified, in the opinion of the superintendent of schools in cities, and the clerk of the board of education in special village and township districts to teach such branches until he or she shall obtain a certificate from the superintendent of schools in cities, and the clerk of the board of education in special village and township districts, certifying that said minor can read at sight and write legibly simple sentences in the English language, and every person, company or corporation having such minor in employment shall be required to exact such school attendance from such minor, and be prepared, upon demand of the hereinbefore mentioned officer, to furnish evidence that such minor does comply with the requirements of this act, and any person, company or corporation failing or neglecting to exact such school attendance from such minors, shall be liable as provided for in section 2 of this act; provided, such person, company or corporation shall not have made provision for the private instruction of such minors.

SEC. 4. That every parent, guardian or other person having charge or control of any child under the age of sixteen who has been discharged from any business in order to be afforded an opportunity to receive instructions or schooling shall send such child to some public or private school until such child shall have acquired such instructions as section 3 of this act requires, and in case of failure on the part of said parent, guardian or other person to comply with the provisions of this section and of section 1 of this act, unless such child shall have been excused from such attendance by the superintendent of public schools or the clerk of the board of education in special village and township districts for reasons stated in section 1 of this act, such parent, guardian or other person shall be deemed guilty of a misdemeanor, and shall, on conviction, be liable to a fine of not more than five dollars or not more than twenty dollars for the first offense, not less than twenty for each subsequent offense, or to imprisonment for not less than one month nor more than three. The said fines, when paid, to be added to public school funds of such school district in which the offense occurs.

Where children have been discharged from employment by reason of this act.

SEC. 5. That all children between the ages of seven and fourteen years who are habitual truants from school, or while in attendance at any public or private school are incorrigible, vicious or immoral in conduct; and all children between said ages, and all minors between the ages of fourteen and sixteen who cannot read and write the English language, who absent themselves habitually from school, who while in attendance at any public or private school are incorrigible, vicious or immoral in conduct, or habitually wander about the streets and public places during school hours, having no business or lawful occupation, shall be deemed juvenile disorderly persons and subject to the provisions of this act.

Habitual truants.

SEC. 6. That in cities of the first and second class the board of education of said cities shall be required to employ one or more truant officers to assist in the enforcement of this act, said truant officer to be vested with police powers, and shall be authorized to enter factories, workshops, stores, and all other places where children may be employed, and perform such other services as the superintendent of schools or the board of education may deem necessary to the preservation of the morals and good conduct of school children and for the enforcement of this act, and in special village and township districts the board of education shall be required to appoint some constable or other person as truant officer, with same power as said officers have in said cities, and the compensation of such officers shall be fixed by the board of education.

Truant officers to be employed in certain cities.

SEC. 7. That the truant officer shall make daily reports to the superintendent of public schools during the school term in cities, and to the clerk of the board of education as often as the clerk shall require it to be done in special

Truant officers to make daily reports.

village and township districts, and he shall also keep a record of his transactions, subject to the inspection of the members and officers of the board of education and it shall be the duty of the clerk of the board of education to provide suitable blanks for said truant officer.

**Duties of
truant officers.**

SEC. 8. That it shall be the duty of all truant officers to examine into all cases of truancy when any such come before their notice, or when requested to do so by the superintendent of public schools, or by the board of education, and to warn such truants, their parents or guardians, in writing, of the final consequences of truancy if persisted in, and also to notify the parent, guardian, or other person having the charge or control of any child between the ages of eight and fourteen years, that the said child is not attending any school, and to require said parent, guardian or other person to cause the said child to attend some recognized school within five days from said notice, and it shall be the duty of said parent, guardian or other person having the legal charge and control of said child, to cause the attendance of said child at some recognized school; if said parent, guardian or other person having the legal charge and control of said child, shall wilfully neglect, fail or refuse to cause said child to attend some recognized school, it shall be the duty of said officers to make, or cause to be made, a complaint against said parent, guardian or other person having the legal charge or control of such child, in any court of competent jurisdiction in the city, special village or township district, in which the offense occurred, for such refusal, failure or neglect, and upon conviction thereof said parent, guardian or other person, as the case may be, shall be punished by a fine of not less than five dollars nor more than twenty dollars, or the court may in its discretion, require persons so convicted to give bond in the penal sum of one hundred dollars, with one or more sureties to be approved by said court, conditioned that said persons so convicted shall cause the child or children under his or her legal charge or control to attend some recognized school within five days thereafter, and to remain at said school during the term prescribed by law; provided, that if said parent, guardian or other person in charge of such child shall prove inability to cause said child to attend said recognized school, then said parent, guardian or other person shall be discharged, and said court, upon complaint of said truant officer or other person, that said child is a juvenile disorderly person, as described in section 5 of this act, proceed to hear such complaint, and if said court shall determine that said child is a juvenile disorderly person within the meaning of this act, such child shall be deemed guilty of a misdemeanor, and said court shall thereupon sentence said child to some juvenile reformatory; provided, that no child or children over ten years old shall be sentenced by any court to a county children's home; and that, where in the judgment of the

trustees of any such home, it shall be declared by resolution at any regular meeting by them held, that the character of any child thus sentenced and kept at such home is vicious, and so bad as to be detrimental and harmful to the habits and good morals of other children at such home, said trustees are hereby authorized and empowered to remove such child from children to the boys' industrial school at Lancaster, Ohio, from the girls' industrial home at Delaware, Ohio, as the case may be; nor shall such child or children be kept at any such home beyond the period prescribed in section 1, or until such child shall arrive at the age of sixteen years, unless sooner discharged by the board of trustees of said reformatory or home. Provided, however, that said sentence may be suspended in the discretion of the court, for such time as the child shall regularly attend school and properly deport himself or herself. It is further provided that if for any cause the parent, guardian or other person having charge of any juvenile disorderly person, as defined in this act, shall fail to cause such juvenile disorderly person to attend said recognized school, then complaint against such juvenile disorderly persons may be made, heard and tried and determined in the same manner as provided for in case the parent pleads inability to cause said juvenile disorderly person to attend said recognized school. * *

SEC. 9. That it shall be the duty of officers empowered and appointed under this act to assist in the enforcement thereof, to institute, or cause to be instituted, proceedings against any parent, guardian or other person having legal control or charge of any child, or corporation violating any of the provisions of this act; provided, that this law shall not be operative in any school district where there are not sufficient accommodations to seat children compelled to attend school under the provisions of this act, and that no prosecution shall be instituted against any parent, guardian or other person or child in charge of such, unless they have received due notification from an officer empowered under this act that they are acting in violation of this act.

Proceedings
when this act
is violated.

SEC. 10. When any truant officer shall discover to his satisfaction any child under the age of fourteen years, wholly or partially dependent upon his or her own labor for living, or who shall be the support of others unable to provide for their own sustenance, or when in the judgment of the superintendent of the schools, or of the board of education, it may be necessary for such child to contribute to the support of the family of which he or she is a member, it shall be the duty of said truant officer to report such case to the proper authorities, whose duty it is to look after and care for the poor, and to endeavor to obtain such relief as may release such child from labor for such length of time each year as will be required for compliance with section 1 of this act, but such child shall not be declared a pauper or removed to any infirmary, reformatory or children's home,

When this act
may be sus-
pended for a
time.

unless he or she shall willfully neglect to take advantage of the provisions made by said truant officer for his or her relief and instruction, and said truant officer failing to obtain such relief, the superintendent of schools, or the board of education, may make suitable arrangements for the private instruction of such child while so adversely conditioned.

Duty of
teachers and
principals
under this
act.

SEC. 11. That it shall be the duty of all principals and teachers of all schools, public and private, to report to the clerk of the board of education of the city, special village or township districts in which schools are situated, the names, ages, and residence of all pupils in attendance at their schools, together with such other facts as said clerk may require, in order to facilitate the carrying out of the provisions of this act, and the said clerk shall furnish blanks for said purpose, and said report shall be made in the last week of September, December, February and April in each year; and it shall be the further duty of said principals and teachers to report to the truant officers, the superintendent of schools or the clerk of the board of education, all cases of truancy or incorrigibility in their respective schools as soon after these offenses shall have been committed as practicable.

When corpor-
ations violate
this act.

SEC. 12. That when any of the provisions of this act are violated by a corporation, proceedings may be had against any of its officers or agents of said corporation, who in any way participate in, or are cognizant of such violation by the corporation of which they are the officers or the agents, and said officers or the agents shall be subject to the same penalties as individuals similarly offending.

Penalty.

SEC. 13. Any person or officer mentioned in this act, and designated as having certain duties to perform in the enforcement of any of its provisions, neglecting to perform any such duties, shall be liable to a fine of not less than twenty-five dollars, nor more than fifty dollars for each and every offense; and mayors, justices of the peace and probate judges shall have jurisdiction to try the offenses described in this act, and their judgment shall be final.

Relating to
other statutes.

SEC. 14. Any provision of statutes in force when this act takes effect, which conflicts with any provisions of this act, shall, the extent it is inconsistent with the latter, and not otherwise, be held to be superseded by this act. The provisions of this act shall apply to children entitled under existing statutes to attend school at the institution for the education of the blind, and the deaf and dumb. Other provisions of the statutes in force, relating to school affairs, shall not be affected by this act, sections 4023, 4024 and 4028 of the Revised Statutes are hereby repealed.

Passed April 25, 1890.

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GOVERNOR OF THE STATE OF OHIO

Chief Inspector of Mines



FOR THE
YEAR NINETEEN HUNDRED AND THREE



Twenty-Ninth Annual Report

OF THE

★
Chief Inspector of Mines

TO THE

Governor of the State of Ohio

FOR THE

YEAR 1903



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COLUMBUS, OHIO, September 24, 1904.

to His Excellency, MYRON T. HERRICK, Governor of the State of Ohio.

SIR:—In accordance with the Revised Statutes, of the State of Ohio, section two hundred and ninety-three, relating to Mines and Mining. I have the honor of submitting to you the Twenty-Ninth Annual Report of this Department.

Very respectfully,

E. G. BIDDISON,
Chief Inspector of Mines.

PERSONNEL OF THE STATE MINING DEPARTMENT.
1903.

Chief Inspector of Mines E. G. Biddison, Columbus, Ohio.

FIRST DISTRICT.

R. M. Mason Logan, Ohio.
Succeeded by Ed. Smith, Logan, Ohio, on August 15, 1903.

SECOND DISTRICT.

D. H. Williams Glouster, Ohio.

THIRD DISTRICT.

D. B. Wilson Corning, Ohio.
Succeeded by John Winefordner, Duncans Falls, Ohio, June 9, 1904.

FOURTH DISTRICT.

Thomas McGough Bridgeport, Ohio.

FIFTH DISTRICT.

W. H. Turner Cambridge, Ohio.

SIXTH DISTRICT.

James P. Davis Salem, Ohio.

SEVENTH DISTRICT.

W. H. Miller Massillon, Ohio.
Chief Clerk—Ruth J. Greene Columbus, Ohio.
Corresponding Clerk—Mary Kincaid Columbus, Ohio.

To His Excellency, HON. MYRON T. HERRICK, Governor of Ohio.

SIR:—In compliance with the Statutes of the State of Ohio, relating to Mines and Mining, this the Twenty-ninth Annual Report of the State Mining Department is herewith submitted.

The statistical portion of this report has been arranged to correspond with the calendar year, while that portion which relates to the Inspection of Mines, extends from November 15, 1902, to November 15, 1903.

The year 1903, commenced by a continuation of the mining price which prevailed the previous year, viz., eighty cents per ton for screened pick mined coal in the Hocking Valley, the basing point for all coal producing districts in the State; but at a joint meeting of Operators and Miners held in Indianapolis, Indiana, (January 29th to February 7th.), composed of the Mining Interests of Illinois, Indiana, Ohio and Western Pennsylvania, the miners secured an advance of ten cents per ton, taking effect April 1st, and to continue for a period of one year.

The coal industry in this State for the year that has just closed was one of marked prosperity not only in point of output, which surpassed that of any year since the creation of the Department, but also the demand for this class of fuel, especially during the fore part of the year was unprecedented, while the close witnessed the trade in good condition, and the prospects for the year 1904 are bright.

On June 9, 1903, Mr. Jno. Winefordner succeeded Mr. D. B. Wilson, Corning, Ohio, as District Mine Inspector for the Third Mining District. On August 6, 1903, Mr. R. M. Mason, Inspector for the First Mining District, resigned from the force to accept a more lucrative position, and on August 15, 1903, Mr. Ed. Smith, Logan, Ohio, was appointed to succeed him.

The industries which are assigned to this Department to collect statistical reports are Coal, Fire Clay, Iron Ore and Limestone, a detailed account of which is included in this report.

SUMMARY FOR THE YEAR 1903.

Number of coal producing counties.....	30
Number of counties in which iron ore was produced.....	2
Number of counties producing limestone.....	37
Number of fire clay producing counties.....	18
Total number of tons of coal produced during the year 1903.....	24,573,266
Gain in output over the year 1902.....	643,979
Number of tons of coal produced by the use of machinery.....	14,560,931
Number of tons produced by pick.....	10,012,335
Number of mining machines in use during the year.....	774
Number of mines in which mining machines were in use.....	188
Number of counties installing the use of machinery.....	18
Total number of persons engaged in the production of coal.....	41,396
Number of miners employed during the year 1903.....	29,834
Number of day hands employed	11,562
Number of hands operating machines.....	1,949
Number of hands following machines	14,181
Estimated amount of powder consumed in the production of coal by the number of firms reporting (kegs).....	233,708
Amount of coal produced from the use of powder.....	19,969,441
Total number of mines in the State during the year 1903.....	954
Total number of mines in operation during the year 1903.....	912
Total number of new mines opened up during the year.....	86
Number of mines suspending operation for the year.....	42
Number of mines reported abandoned.....	18
Total number of inspections made during the year.....	1,511
Number of sets of scales tested.....	188
Number of permanent improvements made.....	325
Number of maps filed	293
Number of casualties.....	574
Number of fatal accidents.....	114
Number of serious accidents	334
Number of minor accidents.....	136
Average number of days worked.....	1764
Number of tons of coal mined to the life lost.....	215,555
One life lost to every 363 persons employed in the mining of coal.	
One person injured in every 72 1-9 employed.	
Total output of iron ore during 1903.....	12,995
Total output of fire clay produced during the year.....	1,567,603

GENERAL COMPARISON OF THE SUMMARY OF 1903
WITH 1902.

More coal was mined by the thirty coal producing counties of the State during 1903 than any year since the creation of the Department, 24, 573, 266 tons in all being mined, a gain of 643, 979 tons over the preceding year. The gain of the year 1902 over the year 1901 reached the immense figures of 3,600,000 tons the banner year for gains.

The amount of coal mined by the introduction of mining machinery in the mines for the year amounted to 14,560,931 tons, a gain of 1,121,283 tons over the previous year.

A gain of 3,975 in the number of persons employed in and around the mines is shown, the total number amounting to 41,396 persons.

The seven District Mine Inspectors in charge of the various mines of the State made 1,511 visits to the mines, a loss of 99 visits as compared with the year 1902.

Three hundred and twenty-five permanent improvements were made in the mines during the year, a gain of 22, as follows: 71 fans, a gain of 12; furnaces, 56, a gain of 6; air shafts, 94, a loss of 4; second openings, 49, a gain of 12; safety catches 17, a loss of 4; stairways, 19 a loss of 1; speaking tubes 10, the same number as reported for 1902. and 9 fire baskets, a gain of 1.

One hundred and eighty-eight sets of scales were tested, 34 more than were tested during 1902.

The time worked for the year was 176 1-6 days, practically the same as for 1902.

The amount of fire clay produced for the year was 1,567.603 tons, a gain of 38,774 tons. The amount of iron ore mined was 13,995 a gain of 2,314. Losses occur in six of the classifications into which the limestone industry is divided and gains appear in six.

Two vacancies occurred in the personnel of the Department, John Winefordner, Duncans Falls, Ohio, succeeding D. B. Wilson, Corning, Ohio, and Ed. Smith, Logan, Ohio, superseding R. M. Mason, of the First Mining District, who resigned.

The Mining Laws of the State of Ohio are embodied in this report; also a list of firms producing fire clay and the firms quarrying limestone. The index follows last.

THE COAL PRODUCTION.

The world's production of coal for the year 1903, (845,000,000 tons), shows a decided increase over the year 1902, of which the larger is attributed to the United States, and was chiefly due to the immense coal production of the State of Pennsylvania, caused by the unprecedented demand for coal during the latter part of the year 1902, a scarcity of this commodity prevailing from the effects upon the country of the great anthracite coal strike which took place in this State, which terminated in a commission being appointed by the President to settle the differences between the miners and the operators, the mines resuming operation in the mean time, and relieving the country of one of the gravest coal famines it was ever called upon to witness. This State alone produced 73,315,000 tons of anthracite coal, showing the immense increase of over five millions produced by it in the year 1901, to say nothing of the bituminous coal also produced by this State. The bituminous coal fields of the United States also yielded an increase in the amount of coal produced, a large amount of development work being inaugurated, and new methods of equipment installed. The United States alone produces one-third of the world's entire output of coal.

On January 14, 1903, congress relieved foreign coal of import duty for a period of one year, believing the coal trade industry of the country at that time warranted such a measure, the home product being curtailed by the protracted strike of the anthracite miners of the State of Pennsylvania. The removal of the import duty on coal in the United States was an experiment, and afforded but slight relief, as so much time was consumed in shipping the coal to this country, and being of inferior quality compared with our own product, and so high in price that great relief was afforded when the strike was settled and our own coal took its place.

On January 15, 1904, the tariff on foreign coal was restored.

Labor contentions restricted the total output but very little the only States suffering in this respect being Alabama, Colorado and Utah.

OUTPUT OF COAL IN OHIO.

The coal industry in Ohio for the year ending December 31, 1903, was one of marked features, not only in the remarkable output, which surpassed all other years, but also the demand which this branch of fuel during the earlier part of the year especially enjoyed.

The scarcity in one grade of fuel creates a demand for the other, and as bituminous coal was called upon to take the place of anthracite in many parts of the country during the long continued strike in Pennsylvania, it enjoyed values not witnessed in thirty years. However, many of the large operators, tied up with yearly contracts, failed to reap the benefit of the high prices which prevailed during the early part of the year. The year 1903 closed with the trade in good condition and the outlook for 1904 was bright.

The coal production in Ohio was increased by the opening up of new mines, and to the increased output of other mines due largely to better railroad facilities in supplying cars and the introduction of many new mining machines.

The State was practically free from disturbances between capital and labor, the Inter-State Agreement between the miners and operators tending in a marked degree to alleviate troubles of this nature.

The year 1903, while not showing the marked increase in point of output as 1902, produced 643,979 more tons, the entire output amounting to 24,573,266 tons. This output has not been exceeded by any other year since the Department was created. This tonnage, as will be seen by the appended table, is divided into three classifications, lump, nut, pea and slack. The total amount of lump coal mined for the year was 17,635,639, or an increase of 93,053 tons. This gain in the amount of lump coal mined does not show the remarkable increase shown in 1902 when it amounted to 2,866,249 tons.

Two million, six hundred and eighty-two thousand (2,682,000) tons of nut coal were mined during the year, an increase of 26,398 tons over the preceding year. The gain in this classification of coal for the year 1902 reached 437,001 tons.

The amount of pea and slack mined during 1903 was 4,255,627, an increase over the preceding year of 524,548 tons. As compared with 1902 the amount of nut mined in 1903 surpassed it by 219,821.

From the foregoing figures it will be seen that gains occur in all the various classifications into which the production is divided. Athens

County, which for the past three years surpassed the production of every other county of the State, still continues to maintain that position reporting 3,905,904 tons of coal mined. As compared with 1902 an increase of 238,911 tons is shown. The gain in this county reached the immense tonnage of 600,460 tons, during 1902.

Perry County, which in 1902 occupied third place in point of production, comes second mining 2,731,595 tons, displacing Guernsey. This amount shows a loss of 99,367 tons as compared with the output of this county in 1902. While Perry County displaced Guernsey in 1903, in point of production, it was only by 15,649 tons.

Guernsey County dropped to third place mining 2,715,946 tons, a loss of 252,162 as compared with the preceding year. The year 1902 for this county showed a gain of 267,911.

Belmont County ranks fourth in production of coal displacing Jackson, which for so many years was one of the foremost coal producing counties, reporting 2,612,025 tons, showing an immense gain of 553,959 over the year 1902. This county in 1902 occupied but sixth place. The gains shown in this county are greater than shown in any other county for the year 1903. This increased output was in all probability due to the number of new mines opened up, thirteen in all, and twelve new mines introduced mining machinery for the first time.

Jackson County, which in years past was looked upon as the greatest coal producing county, has of recent years been on the decline in the comparative amount of coal produced in the State, occupying in 1903 fifth place, and reporting 2,412,116. However, as compared with 1902 a gain of 95,993 tons will be seen. This decline in output is undoubtedly due to the fact that many of the large seams are nearing exhaustion, and being of especially fine quality there is a disposition on the part of the operators to restrict the output for the winter trade, when fancy prices can be realized on the tonnage from this county.

Jefferson County comes sixth in the production of coal, mining a total of 2,320,419 tons, a gain of 530,967 over the preceding year. Jefferson County shows the second largest gains being exceeded only by Belmont. Nine new mines were opened up in this county for the year and nine mines introduced machinery to mine the coal.

Athens County produced almost four million tons of coal, in 1903; Perry, Guernsey and Belmont produced over two and one half million. Jackson and Jefferson over two million, Hocking almost two million, and Tuscarawas 1,328,951. The combined output of these eight counties amounted to 21,795,374 tons or 88 2-3 per cent. of the entire output of the State. Belmont shows the greatest gain, 553,959 tons; Jefferson.

530,967, Athens, 238,911, Jackson, 95,993, Carroll, 74,443, Lawrence 62,504, Meigs, 47,868, Vinton, 44,511 and Morgan, 31,878 tons.

Losses are found in the following counties: the greatest occurring in Stark, amounting to 258,569 tons; Guernsey, 252,162 tons; Tuscarawas, 248,703 tons; Hocking, 151,169 tons; Perry, 99,367 tons; Summit, 49,257 tons; and Harrison, 44,735 tons.

The Hocking Valley District, comprised of the counties of Hocking, Athens and Perry, produced 8,605,135 tons of coal, or 35 per cent. of the total output. As compared with the output of this district for the previous year it will be seen that a loss of 11,625 tons occur.

Gains amounting to 1,759,187 tons occur in twenty counties, and losses aggregating 1,115,208 tons are found in ten.

In reviewing the coal trade for the year 1903 there is just cause for congratulation for those engaged in the mining industry as will be evidenced from a comparison and examination of the following tables which are designed to show the work accomplished in the various mines of the State as reported to this Department. The demand was all that could be desired, and prices maintained throughout the year brought good profits to producers. The beginning of the year 1904 bids fair for another prosperous year in the coal trade.

TABLE SHOWING THE COAL PRODUCTION OF THE STATE BY
COUNTIES DURING THE YEAR 1903.

Counties.	Tonnage for 1903.			Total.	Rank in produc- tion.
	Lump.	Nut.	Pea and Slack.		
Athens	3,011,840	283,800	610,264	3,905,904	1
Belmont	1,707,694	339,133	565,288	2,612,025	4
Carroll	221,266	57,416	47,413	326,095	13
Columbiana	572,273	137,773	164,556	874,602	10
Coshocton	269,272	68,903	94,046	422,221	11
Gallia	18,213	1,666	4,010	23,889	26
Guernsey	1,906,671	271,162	538,113	2,715,946	3
Harrison	170,965	37,079	41,063	249,106	16
Holmes	23,862	4,824	3,413	32,099	25
Hocking	1,518,060	145,333	304,243	1,967,636	7
Jackson	1,735,192	380,104	296,820	2,412,116	5
Jefferson	1,617,189	170,023	533,207	2,320,419	6
Lawrence	185,178	21,064	42,897	249,139	15
Mahoning	68,115	9,545	11,558	89,218	21
Medina	95,918	15,615	25,270	136,803	18
Melgs	234,029	124,048	30,481	388,568	12
Morgan	60,623	6,640	15,052	82,315	22
Monroe	150	6	8	164	28
Muskingum	223,461	28,998	53,474	305,933	14
Noble	36,112	9,219	6,916	52,247	23
Perry	2,060,787	258,106	412,702	2,731,595	2
Portage	76,169	10,784	14,936	101,889	19
Scioto	6,445	1,150	920	8,515	27
Stark	709,719	75,147	141,314	926,180	9
Summit	34,217	2,976	7,136	44,329	24
Trumbull	6,567	414	1,495	8,476	29
Tuscarawas	873,472	203,519	251,960	1,328,951	8
Vinton	114,899	20,067	19,968	154,934	17
Washington	2,000	1,500	500	4,000	29
Wayne	75,361	5,986	16,605	97,952	20
Totals.....	17,635,639	2,682,000	4,255,627	24,573,266	.....

**E SHOWING THE COAL TONNAGE OF THE STATE FOR 1903 AS
COMPARED WITH THE YEAR 1902.**

Counties.	1902.	1903.	Gain.	Loss.
s	3,666,993	3,905,904	238,911	.....
nt	2,058,066	2,612,025	553,959	.....
l	251,652	326,095	74,443	.....
blana	868,426	874,602	6,176	.....
cton	410,309	422,221	11,912	.....
.....	26,450	23,889	.....	2,561
sey	2,968,108	2,715,946	.....	252,162
son	293,841	249,106	.....	44,735
s	17,187	32,099	14,912	.....
ng	2,118,805	1,967,636	.....	151,169
on	2,316,123	2,412,116	95,993	.....
son	1,789,452	2,320,419	530,967	.....
nce	186,635	249,139	62,504	.....
ing	94,773	89,218	.....	5,555
a	139,933	136,803	.....	3,130
.....	340,700	388,568	47,868	.....
an	50,437	82,315	31,878	.....
ve	132	164	32	.....
ngum	286,532	305,933	19,401	.....
.....	34,992	52,247	17,255	.....
.....	2,830,962	2,731,595	.....	99,367
ge	97,928	101,889	3,961	.....
.....	8,351	8,515	164	.....
.....	1,184,749	926,180	.....	258,569
it	93,586	44,329	.....	49,257
bull	8,143	8,476	333	.....
rawas	1,577,654	1,328,951	.....	248,703
.....	110,423	154,934	44,511	.....
ington	3,930	4,000	70	.....
e	94,015	97,952	3,937	.....
otals.....	23,929,287	24,573,266	1,759,187	1,115,208

et gain in tonnage in 1903 over 1902, 643,979.

TABLE SHOWING THE COAL OUTPUT OF THE STATE FROM 1872 TO 1903 INCLUSIVE.

Years.	Output.	Gain.	Loss.
1872.....	5,313,294	.....	.....
1873.....	4,550,028	.....	75,526
1874.....	3,267,585	.....	128,224
1875.....	4,864,259	1,596,674	.....
1876.....	3,500,000	.....	1,364,259
1877.....	5,250,000	1,750,000	.....
1878.....	5,500,000	250,000	.....
1879.....	6,000,000	500,000	.....
1880.....	7,000,000	1,000,000	.....
1881.....	8,225,000	1,225,000	.....
1882.....	9,450,000	1,225,000	.....
1883.....	8,229,429	.....	1,220,571
1884.....	7,650,062	.....	579,367
1885.....	7,816,179	166,117	.....
1886.....	8,435,211	619,032	.....
1887.....	10,301,708	1,866,479	.....
1888.....	10,910,946	613,338	.....
1889.....	10,907,385	.....	3,561
1890.....	11,788,859	881,474	.....
1891.....	13,050,187	1,261,328	.....
1892.....	14,599,908	1,549,721	.....
1893.....	14,828,097	228,189	.....
1894.....	11,910,219	.....	2,917,878
1895.....	13,683,879	1,773,660	.....
1896.....	12,912,608	.....	771,271
1897.....	12,448,822	.....	463,786
1898.....	14,058,155	1,609,333	.....
1899.....	15,908,934	1,850,799	.....
1900.....	19,426,649	3,517,715	.....
1901.....	20,321,290	894,841	.....
1902.....	23,929,267	3,607,977	.....
1903.....	24,573,266	643,979	.....

COAL MINED BY THE USE OF MACHINERY.

Machinery still continues to prove a great factor in increasing the output of coal in the State, 14,560,931 tons being mined from its use alone during the year 1903, the greatest production ever recorded from this source of mining coal. When compared with the preceding year a gain of 1,121,283 tons is shown. The gain in machine mined coal for the year 1902 reached the remarkable figures of 2,949,834 tons, the greatest gain ever shown before or since. It is interesting to note the important part machinery has played in the production of coal since it was first introduced into the mines of our State in 1899; the tonnage for that year is given at 900,000 tons, while the year 1903 records a tonnage of over fourteen million tons. The number of mining machines and motors in use in the State for the year was 774, and are found in eighteen of the coal producing counties. But one fatal accident occurred from the use of mining machines during the year, and two from coming in contact with electric wires. We consider this a remarkable showing taking into consideration the number that are in use at the mines at the present time.

The same number of counties report the use of mining machines as in 1902, Mahoning being dropped from the list, and Lawrence added thereto. As the amount of coal produced by machinery increased the number of hands operating and following machines increased. The total number of hands operating machines for the year 1903 was 1,949, a gain of 531 compared with the preceding year. The number reported as following machines is given as 14,181, a gain of 3,092 over the year 1902.

Athens County still ranks first in the number of hands following and operating machines employing a total of 4,183 men and producing 3,735,400 tons, a loss of 170,504 tons as compared with 1902. The total amount of coal produced in this county both by the use of the pick and mining machine amounted to 3,905,904 tons, from which it will be seen that only 170,504 tons were mined by the use of the pick, showing conclusively to what extent mining machinery is used in this county.

Perry County ranks second in the number of machine men employing 2,809 and mining 2,188,446 tons of coal; Guernsey follows with 2,083 men and producing 2,595,116 tons, and Hocking with 1,762 men and mining 1,896,748 tons.

Belmont and Jefferson each produced over a million tons of coal from the use of machinery. Athens produced more machine mined coal than any other county, 3,735,400 tons, followed by Guernsey with 2,595,116, Perry with 2,188,446 tons, Belmont, 1,299,147 tons, Hocking, 1,896,748 and Jefferson 1,245,880 tons.

Belmont county shows a phenomenal gain of 729,155 tons; Jefferson, 274,818; Carroll, 167,088; Athens, 145,123; Perry, 71,613; Coshocton, 55,402; Morgan, 50,940; Jackson, 24,990; Noble, 24,985; Lawrence 20,745 tons; Columbiana, 15,177 and Vinton, 10,644 tons.

The greatest loss occurred in Guernsey, amounting to 294,370 tons; Hocking, 104,464; Harrison, 39,029; Tuscarawas, 26,178 and Stark 5,356 tons.

Gains occurred in twelve counties and losses in five. Athens County employed the use of one hundred and fifty-two mining machines and twenty-four motors; Jefferson, one hundred and eighteen mining machines and twenty-six motors.

The following table shows the number of days worked, number of hands operating and following machines, and the amount of coal produced by each county by the use of machinery. The second table exhibits the total amount of coal mined from machinery from 1899 to 1903 inclusive.

SHOWING THE AMOUNT OF COAL MINED BY MACHINERY, THE
 ME WORKED, AND THE NUMBER OF MEN EMPLOYED IN MACHINE
 MINING DURING THE YEAR 1903.

Counties.	Days worked.	Hands operating machines.	Hands following machines.	Lump.	Nut.	Pea and slack.	Total.
.....	174	412	3,771	2,874,075	263,421	592,904	3,735,400
t	191	219	1,295	849,671	165,100	284,376	1,299,147
.....	220	55	298	194,972	49,651	39,703	284,326
iana	216	38	242	210,070	48,181	69,988	328,239
on	215	29	288	76,718	11,417	18,077	106,212
y	194	235	1,848	1,809,903	257,377	527,836	2,595,116
n	204	.....	4	5,374	1,422	1,106	7,902
g	170	171	1,591	1,462,804	139,170	294,774	1,896,748
t	201	114	512	378,316	49,890	57,585	485,791
n	176	228	1,334	892,873	79,520	273,487	1,245,880
ce	129	8	40	17,059	.....	5,686	22,745
.....	174	24	57	54,296	5,723	12,981	73,005
.....	392	6	31	22,910	8,073	5,382	36,365
.....	186	307	2,502	1,653,936	161,981	372,529	2,188,446
.....	129	30	117	48,578	1,164	2,227	51,969
was	169	63	206	122,280	34,819	25,658	182,757
.....	125	10	45	14,590	3,319	2,974	20,883
als.....	3,265	1,949	14,181	10,688,425	1,285,233	2,587,273	14,560,931
verage.....	190	.....	.....	.....	.....	.....	.....

TABLE SHOWING ANNUAL PRODUCTION OF MACHINE MINED COAL
SINCE THE INTRODUCTION OF ELECTRICITY INTO THE MINES OF
THE STATE.

Years.	Output.	Gain.	Loss.
1889	900,000	.....	.....
1890	1,148,499	248,499	.....
1891	1,654,081	505,632	.....
1892	2,239,080	584,999	.....
1893	2,553,074	313,994	.....
1894	2,555,466	2,392	.....
1895	3,120,458	564,990	.....
1896	3,368,349	247,893	.....
1897	4,106,124	737,775	.....
1898	5,252,598	1,146,474	.....
1899	6,741,060	1,488,462	.....
1900	9,457,777	2,716,717	.....
1901	10,489,814	1,032,037	.....
1902	13,439,648	2,949,834	.....
1903	14,560,931	1,121,283	.....

MINES IN WHICH MINING MACHINES HAVE BEEN INSTALLED AND THE NUMBER AND KIND OF EACH.

To a careful observer of the coal mining industry, and the progress has made within the past thirty years, one would not be long in being convinced that the coal of the future would be, to a great extent, mined by mechanical methods. With this prospect in view numerous manufacturing companies have equipped and placed on the market mining machines and motors, until at the present time they have seemed to attain their highest degree of efficiency, each possessing merits adapted to special conditions which surround different mining localities.

In Ohio, the Jeffrey Mining Machine seems to take the lead, 334 being in use, in addition to eight compressed air machines; also 60 motors manufactured by this firm are installed in the mines of the State. The Morgan-Gardner Electric Mining Machines have been placed in 25 mines to the number of 250; also 105 Independent Link Belt Machines and seven General Electric.

The total number of mining machines introduced in the mines of the State during the year increased 200, in all 774 being in use. These were installed in 188 mines, or an increase of 47 mines using machinery over the preceding year. Of this number 696 were of the electric type, and 78 compressed air machines. Eight Jeffrey compressed air machines were in use, 40 Harrison and 25 Ingersoll-Sergeant. These were reported in use in 18 counties.

The use of mining machines was discontinued at the Greenmyer shaft mine, Mahoning County, removing this county from the list, but was replaced by Lawrence County, making the total number of counties reporting the same as the year 1902.

In Athens County the following mines were added to the list which have installed mining machinery: No. 255, owned by the Continental Coal Co., Columbus, Ohio; No. 3 or Half Moon, owned by Juniper & Barber, Nelsonville; Halbert, New York Coal Co., Columbus; Moor Mine, owned by the Hocking Mining Co., Athens, O.; Winchester, Winchester Coal Co., Carbondale, O.; and the Sharpsburgh mine owned by J. F. Scheuler, Sharpsburgh, O.

In Belmont County, the following: Crescent Three and One Half and Number Three mines, owned by the Lorain Coal & Dock Co., Cleve-

land, O.; Barton mine, Youghiogheny Coal Co., Barton, O.; Bogg N. Boggs, Barton, O.; Taggart, Barton Coal Co., Barton, O.; Frar Hart Coal Co., Stewartsville, O.; Gaylord, Pittsburg-Cleveland Coal Co., Martins Ferry, O.; Johnson Bros. Mine owned by Johnson Bros., Dillies Bottom, O.; Buckeye, Buckeye Coal & Mining Flushing, O.; and Rosser owned by the West Wheeling Coal Co., laire, O.

In Carroll County the following mines: Magnolia, owned by Magnolia Coal Co., Magnolia, O.; Somers No. 3, C. W. Somers, C land, O.

Cochocton County the following mine: Arnold, Arnold Coal Columbus, O.

Guernsey County, Detroit, owned by the Wills Creek Coal Detroit, Michigan; Blue Bell, Opperman Coal Co., Cambridge, Cleveland, Somers-Cambridge Coal Co., Cleveland, O.

In Harrison County. Ewing mine owned by The Pittsburg B Coal Co., Pittsburgh, Pa., installed a Westinghouse locomotive; Ticanoe mine owned by Oglevee-Scott Coal Co., Cleveland, O., install Goodman motor.

Hocking County: No. 208 mine owned by the Continental Coal Columbus, O.; No. 15, owned by G. W. Hite Coal Co., Sand Run, O.; East Hill mine owned by The East Hill Coal Co., Nelsonville, O.

Jackson County: Superior 8 and 9, owned by Superior Coal Jackson, O.; Acorn, Jones Coal Co., Jackson, O.; Jones & Morgan, 3, owned by Jones & Morgan, Jackson, O.; Enterprise, Enterprise C Co., Jackson, Ohio; Symmes Creek, Symmes Creek Coal Co., Remple, and Commercial, Commercial Coal Co., Jackson, O.

Jefferson County: Zerbe, O. & P. Coal Co., Cleveland, O.; LaBelle LaBelle Iron Works, Steubenville, O.; Jefferson, No. 1 and 2, Jefferson Coal Co., Cleveland, O.; Morris & Posten, Morris & Posten, Duglen, O.; United States Mines, U. S. Coal Co. Dillonvale, O.; O'Neil O'Neil Coal Co., Herrick, O.; Ramsey No. 3, 4 and 5, Roby Coal Co Cleveland, O.; XL, Jno. Kirk & Co., Bergholz, O.

Lawrence County: Irish Hollow mine, owned by the Black Fork Coal Co., Black Fork, O.

Morgan County: Tropic, Tropic Mining Co., Toledo, O.

Perry County: Keystone, No. 1, 2, 3 and 4 mines owned by Zanesville Coal Co., Zanesville, Imperial, Imperial Coal Co., Columbus, O.

installed a Jeffrey motor; San Toy No. 1 and 2, New England Coal Co., Columbus, O.; Rends, Standard-Hocking Coal Co., Chicago, Illinois, and Peerless owned by Hamilton & Wallace, Redfield, O.

Stark County: Pocock No. 3, J. F. Pocock, Massillon, O.; Canton Hollow Block, Canton Hollow Block Co., Canton, O.

Tuscarawas County: Houk, American Sheet Steel Co., Canal Dover, O., introduced two General Electric Motors; Somerdale No. 2, Somerdale Coal Co., Somerdale, O., and Mullen mine, owned by James Mullen, Massillon, O.

Vinton County: Inghams mine owned by Morehead Bros. & Jaynes, Camden Junction, O. and Raccoon Valley, J. L. Lawler, Minerton, O.

One hundred and forty-three motors were in use during the year 1903, 60 being of the Jeffrey type, 30 Goodman, 42 Morgan-Gardner, 4 General Electric, 5 Link Belt, 1 Westinghouse and 1 Sperry Electric, in addition to 4 locomotives.

One fatal, 12 serious and two minor accidents occurred from the use of mining machines in the mines, and 14,565,931 tons of coal were mined from their use.

TABLE SHOWING THE NUMBER, MANUFACTURER OF MOTIVE POWER AND LOCATION OF THE MINING MACHINES AND ELECTRIC MOTORS IN OPERATION IN THE STATE DURING THE YEAR 1903.

Name of Mine.	County.	Electricity.				Compressed Air.				Motors.
		Jeffrey.	Morgan-Gardner.	Independent Link Belt.	General Electric Co.	Jeffrey.	Harrison.	Ingersoll-Sergeant.	Sullivan.	
Carbondale No. 2 } Carbondale No. 3 }	Athens	.....	.....	6	.....	.....	.....	.....	.....	Goodman.
No. 201 } No. 203 } No. 204 } No. 205 } No. 252 } No. 254 } No. 255 } No. 256 } No. 266 } No. 267 } No. 275 } No. 281 } No. 311 } No. 10X }	Athens	6	40	2	.....	5	.....	.....	.....	{ 8 Morgan-Gardners. { 1 Jeffrey. { 1 General Electric.
No. 10.....	Athens	2	3	1	.....	.....	.....	.....	.....	{ 1 Link Belt. { 1 Morgan-Gardner.
Luhrig No. 1 } Luhrig No. 2 }	Athens	.....	7	.....	.....	.....	.....	.....	.....	{ 2 Morgan-Gardner. { 1 Link Belt.
.....	Athens	5	4	4	.....	.....	.....	.....	.....	3 Goodman.

[illegible]

Clisco	Guernsey	6	.....	.....	.....	.....	1 Jeffrey.
Blue Bell }	Guernsey	6	.....	.....	.....	.....	3 Goodman.
Kings	Guernsey	5	.....	.....	.....	.....	1 Goodman.
Old Orchard	Guernsey	3	.....	.....	.....	.....	1 Link Belt.
Forsythe	Guernsey .....	.....	.....	.....	.....	.....	1 Jeffrey.
Klondike	Guernsey	4	.....	.....	.....	.....	1 Goodman.
Imperial	Guernsey	5	.....	.....	.....	.....	.....
Little Kate	Guernsey	1	.....	.....	.....	.....	1 Locomotive.
Black Top	Guernsey	3	.....	.....	.....	.....	2 Jeffries.
Murray Hill	Guernsey	6	.....	.....	.....	.....	Westinghouse Loc.
Cleveland	Guernsey	2	.....	.....	.....	.....	Goodman.
Roby No. 1	Harrison	4	.....	.....	.....	.....	.....
Ewing	Harrison .....	.....	.....	.....	.....	.....	.....
Tippecanoe	Harrison .....	.....	.....	.....	.....	.....	.....
New Pittsburgh No. 1	Hocking	4	.....	.....	.....	.....	.....
New Pittsburgh No. 3	Hocking	3	.....	.....	.....	.....	.....
New Pittsburgh No. 6	Hocking	7	.....	.....	.....	.....	1 Jeffrey.
New Pittsburgh No. 7	Hocking	4	.....	.....	.....	.....	1 Jeffrey.
Buckeye No. 4	Hocking	1	.....	.....	.....	.....	.....
Buckeye No. 2 }	Hocking	4	.....	.....	.....	.....	3 Goodman.
Buckeye No. 3 }	Hocking	10	.....	.....	.....	.....	.....
Sand Run	Hocking	4	.....	.....	.....	.....	.....
No. 202 }	Hocking .....	.....	.....	.....	.....	.....	.....
No. 206 }	Hocking	3	.....	.....	.....	.....	{ 1 Morgan-Gardner.
No. 207 }	Hocking	8	.....	.....	.....	.....	{ 1 Link Belt.
No. 208 }	Hocking .....	.....	.....	.....	.....	.....	.....
No. 15	Hocking	2	.....	.....	.....	.....	.....
East Hill	Hocking	1	.....	.....	.....	.....	.....
Superior No. 8	Jackson	1	.....	.....	.....	.....	.....
Superior No. 9	Jackson	1	.....	.....	.....	.....	.....
Springfield	Jackson	5	.....	.....	.....	.....	2 Jeffrey Locomotives.
Milton No. 3	Jackson	4	.....	.....	.....	.....	Jeffrey.
Acorn	Jackson	3	.....	.....	.....	.....	.....
Jones & Morgan No. 3	Jackson	2	.....	.....	.....	.....	.....
Tom Corwin No. 1	Jackson	3	.....	.....	.....	.....	2 Morgan-Gardner.
Machine Coal Co.	Jackson	2	.....	.....	.....	.....	.....

Jefferson No. 2 { West Pittsburgh Morris-Poston	Jefferson Jefferson	5	5	5	1 Goodman. Goodman.
United States Mines	Jefferson	15	15	15	{ Westinghouse Loco- motive; 1 Baldwin. 1 Jeffrey.
Jumbo	Jefferson	2	2	2	{ 1 Goodman. 1 Jeffrey.
O'Neill	Jefferson	3	3	3	
Ramsey No. 3 { Ramsey No. 4 Ramsey No. 5 }	Jefferson	5	5	5	
XL	Jefferson	6	6	6	
Irish Hollow	Lawrence	6	6	6	
Silver Run	Meigs	2	2	2	1 Morgan-Gardner.
Rose	Morgan	5	5	5	
Tropic	Morgan	5	5	5	
Laura	Noble	1	1	1	
Rock Run No. 3	Perry	1	1	1	
No. 8	Perry	1	1	1	1 Morgan-Gardner.
No. 21	Perry	3	3	3	1 Morgan-Gardner.
No. 321	Perry	5	5	5	
No. 322	Perry	2	2	2	
No. 5	Perry	3	3	3	1 Goodman.
No. 9	Perry	2	2	2	{ 1 Jeffrey. 1 Morgan-Gardner.
No. 12	Perry	3	3	3	
No. 20	Perry	15	15	15	
No. 253 { No. 268 No. 301 }	Perry	3	3	3	{ 2 Jeffries. 2 Morgan-Gardner.
Upson	Perry	6	6	6	2 Jeffries.
Beech Grove	Perry	2	2	2	Morgan-Gardner.
No. 37	Perry	2	2	2	1 Jeffrey.
Union	Perry	2	2	2	
Bristol	Perry	2	2	2	
Keystone No. 1 { Keystone No. 2 Keystone No. 3 Keystone No. 4 }	Perry	2	2	2	2 Morgan-Gardner.

NUMBER OF MINES IN OPERATION DURING THE YEAR 1903,
AND THE TIME WORKED AS COMPARED WITH
THE YEAR 1902.

Of the nine hundred and fifty-four mines both large and small in the State which make a statistical report to this Department of the amount of coal produced, nine hundred and twelve were in operation during the year, a gain of six as compared with the preceding year. This number represents small mines employing less than ten men, and large mines employing more than ten.

Perry County, as for the year 1902, reported the largest number of mines both large and small, having a total of 87 of this number in operation, or eight more than were reported in the year 1902. Stark County follows with seventy-seven; Belmont, seventy-three; Muskingum, seventy-one; Jackson, sixty-six and Tuscarawas, sixty-four.

Thirteen counties report gains. Belmont and Jefferson counties each show a gain of nine mines; Perry, eight; Guernsey, Hocking and Muskingum, four each; Athens, Gallia and Lawrence, two each, and Holmes, Monroe, Stark and Wayne, one each.

The combined gain amounted to forty-eight mines.

Losses occur in twelve counties, thirteen of which were reported from Noble, six from Tuscarawas, five from Mahoning, four from Harrison, three each from Columbiana and Medina, two each from Coshocton and Jackson, and one each from Portage, Summit, Trumbull and Washington, in all a total of forty-two.

The average time worked for the year was practically the same as that reported worked in 1902, there only being a fraction of one-sixth difference.

Eighteen counties show gains in the time worked, amounting to three hundred and eleven days, which occurred in the following counties: Holmes, Scioto, Washington, Portage, Coshocton, Vinton, Jefferson, Stark, Meigs, Mahoning, Harrison, Jackson, Monroe, Muskingum, Trumbull, Perry, Noble and Columbiana.

Losses in the amount of time worked for the year are found in twelve counties as follows: Athens, Belmont, Carroll, Gallia, Guernsey, Hocking, Lawrence, Medina, Morgan, Summit, Tuscarawas and Wayne, amounting to three hundred and six days.

The greatest gain was made in Holmes County amounting to 49 days; Scioto, 46; Washington, 42; Portage, 39; Coshocton, 19.

The greatest losses appear in Morgan, 77 days; Carroll, 51 days; Lawrence, 45 days; Guernsey, 39 days and Belmont, 28 days.

The following table gives in detail the comparative number of mines in operation and time worked of the year 1903 as compared with the year 1902.

TABLE SHOWING THE NUMBER OF MINES OPERATED AND DAYS WORKED IN 1902 AND IN 1903.

Counties.	Number mines worked in 1902.	Number mines worked in 1903.	Gain.	Loss.	Average number days worked 1902.	Average number days worked in 1903.	Gain.	Loss.
Athens	46	48	2	.....	179	172	.....	7
Belmont	64	73	9	.....	208	180	.....	28
Carroll	20	20	.....	.....	245	194	.....	51
Columbiana	51	48	.....	3	202	210	8	.....
Coshocton	23	21	.....	2	194	213	19	.....
Gallia	3	5	2	.....	200	185	.....	15
Guernsey	30	34	4	.....	199	160	.....	39
Harrison	36	32	.....	4	149	156	7	.....
Holmes	12	13	1	.....	180	229	49	.....
Hocking	17	21	4	.....	185	179	.....	6
Jackson	68	66	.....	2	191	200	9	.....
Jefferson	52	61	9	.....	185	202	17	.....
Lawrence	22	24	2	.....	228	183	.....	45
Mahoning	28	23	.....	5	186	201	15	.....
Medina	13	10	.....	3	242	226	.....	16
Meigs	31	31	.....	.....	173	183	10	.....
Morgan	2	2	.....	.....	201	124	.....	77
Monroe	2	3	1	.....	85	90	5	.....
Muskingum	67	71	4	.....	185	190	5	.....
Noble	45	32	.....	13	148	150	2	.....
Perry	79	87	8	.....	162	167	5	.....
Portage	4	3	.....	1	128	167	39	.....
Scioto	3	3	.....	.....	78	124	46	.....
Stark	76	77	1	.....	203	213	10	.....
Summitt	10	9	.....	1	162	161	.....	1
Trumbull	6	5	.....	1	144	148	4	.....
Tuscarawas	70	64	.....	6	211	193	.....	18
Vinton	15	15	.....	.....	150	169	19	.....
Washington	2	1	.....	1	108	150	42	.....
Wayne	9	10	1	.....	169	166	.....	3
Total	906	912	48	42	176	176½	311	306
Gain .....	.....	.....	6	.....	.....	.....	.....	.....

LARGE AND SMALL MINES IN THE STATE, AND THE
NUMBER OF EACH THAT WERE IN OPERA-
TION DURING THE YEAR 1903.

The coal mines of the State are classified into two divisions, large, employing from ten up to hundreds of miners, and small, where less than ten find employment.

The number of mines designated as large numbered, during the year 1903, four hundred and ninety-nine, while the number of small mines is given at four hundred and fifty-five. The total number of mines, both large and small, in the State for the year was nine hundred and fifty-four, a decrease of thirteen as compared with the year 1902. Of the entire number of mines reported in the State for the year, nine hundred and twelve were in operation, an increase of six reported for the year 1902. Of the large mines four hundred and eighty-eight reported working in 1903, an increase of fifty-four, while a decrease of forty-eight in the number of small mines in operation is shown, there being a total of four hundred and twenty-four.

Jackson County leads in the number of large mines having in all 59, an increase of 5 over the previous year; Perry, 52, an increase of 8; Belmont, 46, an increase of 13; Jefferson, 44, an increase of 15, and Athens and Stark, an increase of 4 and 5 each.

Eleven large mines and 31 small ones suspended operations during the year.

Muskingum County leads in the number of small mines, 58 being in operation; Perry and Stark each have 35, and Tuscarawas 30.

The following mines opened up during the year give promise of being worked on an extensive scale: Athens County—No. 255 and Kimberly No. 8 owned by the Continental Coal Co., Columbus, O.; Luhrig No. 3, owned by the Luhrig Coal Co., Cincinnati, O.; Shingler, Winchester Coal Co., Carbondale, O.; Moor. Hocking Mining Co., Athens, O.; and Doanville No. 2 owned by The C. & H. C. & I. Co., Columbus, Ohio.

Belmont County: Crescent No. 6 and Lansing, owned by The Lorain Coal & Dock Co., Cleveland, O.; Kings Run, Belmont Mining Co., Pittsburgh, Pa.; New Taggart, Barton Coal Co., Barton, O.; Dellora No. 2, Weaver Coal Co., Chicago, Ill.; Neff. Neff Mining Co., Neffs,

TABLE

	Wheeling, W. Va.; Troll No. 1, Wheeling, W. Va.; Lydia, Purseglove Coal Co., Cleveland, O.; and Summit No. 1 and 2, Summit Coal Co., Flushing, O.; and Blue Oak, Burton Hauler & Phillips, Cleveland, O.
	Carnegie County: The Vein owned by The Sterling Mining Co., Cleveland, O.; and Starkey No. 3 by John Starkey, Minerva, O.
	Columbiana County: Prospect Hill No. 3, Prospect Hill Coal Co., East Palestine, O.; Farquhar, Lemmon Coal Co., Salem, O.; and Burnett, owned by the Uneda Coal Co., Lisbon, O.
	Guernsey: Hazel, Opperman Coal Co., Cambridge, O.; Cleveland No. 1, Somers-Cambridge Coal Co., Cleveland, O.; and Union No. 1, owned by The Toledo Coal & Coke Co., Toledo, O.
	Gallia County: Vinton mine owned by the Vinton Coal Co., Vinton, O.
	Harrison County: Ewing mine owned by The Pittsburgh Block Coal Co., Pittsburgh, Pa.
	Hocking County: Snake Hollow, No. 1 and 2 owned by the Continental Coal Co., Columbus, O.; and Beech Nut mine owned by the Buckeye Coal & Railway Co., Columbus, O.
	Jackson County: Tibbals mine, owned by W. Tibbals & Co., Jackson, Ohio.
	Jefferson County: Portland mine owned by The Portland Coal Co., Wheeling, W. Va.; O'Neil, O'Neil Coal Co., Adena, O.; Amsterdam, Amsterdam Coal Co., Cleveland, O.; Dorothy, owned by M. L. Williams Coal & Coke Co., Portland, O.; Roby No. 3, 4 and 5, Roby Coal Co., Cleveland, O.; and Block House, owned by the Brilliant Coal Co., Brilliant, O.
	Lawrence County: Black Fork No. 1, 4, 5 and 6 mines owned by the Black Fork Coal Co., Black Fork, O.
	Muskingum County: Maynard No. 7 owned by Maynard Bros., Columbus, O.
	Noble County: Bell Valley, owned by the Bell Valley Coal Co., Cleveland, O.
	Perry County: Tyson, owned by the Tyson Coal Co., Washington Court House, O.; W. P. Rends mine, owned by The Standard Hocking Coal Co., Chicago, Ill. and Valley No. 105, owned by The Imperial Mining Co., Columbus, O.

Stark County: No. 17 and 18 mines owned by the Massillon Coal Mining Co., Massillon, O.; Elm Run No. 5 and 6, Davis & Somers Coal Co., Canton, O.; South Massillon, South Massillon Coal Co., Massillon, O.; East Massillon, East Massillon Coal Co., Massillon, O.; Davis No. 2 mine, owned by Ed Eli, Alliance, O.; and Bramley, Cleveland-Massillon Coal Co., Cleveland, Ohio.

Tuscarawas County: Royal Coal No. 2 mine, owned by the Royal Goshen Coal Co., Midvale, O.; Beaver, Eagle Coal & Mining Co., Canal Dover, O.; Egypt No. 1, Mullen & Co., Massillon, O.; North Goshen, J. E. Reeves, Canal Dover, O.; Beaver Dam No. 2, Beaver Dam Coal Co., Cleveland, O. and Goshen Hill owned by the Goshen Hill Coal Co., Cleveland, O.

Wayne County: West Lebanon No. 2 mine owned by the West Lebanon Coal Co., Cleveland, O.

TABLE SHOWING THE NUMBER OF LARGE AND SMALL MINES IN THE STATE AND THE NUMBER OF EACH THAT WERE IN OPERATION DURING 1903.

Counties.	No. mines which employ more than ten men.	No. mines which employ less than ten men.	Total by counties.	No. large mines in operation during 1903.	No. small mines in operation during 1903.	Total No. mines in operation during 1903.
Athens	44	7	51	42	6	48
Belmont	46	28	74	46	27	73
Carroll	10	10	20	10	10	20
Columbiana	25	26	51	24	24	48
Coshocton	12	9	21	12	9	21
Gallia	2	3	5	2	3	5
Guernsey	24	12	36	23	11	34
Harrison	5	31	36	5	27	32
Holmes	2	11	13	2	11	13
Hocking	19	2	21	19	2	21
Jackson	59	7	66	59	7	66
Jefferson	44	17	61	44	17	61
Lawrence	13	14	27	10	14	24
Mahoning	4	22	26	4	19	23
Medina	6	4	10	6	4	10
Meigs	15	17	32	14	17	31
Morgan	2	.....	2	2	.....	2
Monroe .....	.....	3	3	.....	3	3
Muskingum	13	63	76	13	58	71
Noble	1	41	42	1	31	32
Perry	53	36	89	52	35	87
Portage	3	.....	3	3	.....	3
Scioto .....	.....	3	3	.....	3	3
Stark	42	37	79	42	35	77
Summit	1	8	9	1	8	9
Trumbull	1	4	5	1	4	5
Tuscarawas	35	31	66	34	30	64
Vinton	10	6	16	9	6	15
Washington	1	.....	1	1	.....	1
Wayne	7	3	10	7	3	10
Total	499	455	954	488	424	912

MINERS AND DAY HANDS.

While the output of coal for the year 1903 increased 643,979 tons, and the total number of miners and day hands reached 41,396, an increase of 3,975 over the preceding year, the time worked did not compare favorably with 1902, and as such the year was not as prosperous a one in dollars and cents to the average mine worker. The immense amount of machinery used in the mines has done much to eliminate manual labor, while on the other hand the number of miners is gradually on the increase each year, which has had a tendency to reduce the amount of labor to the individual. In view of these facts the mines of the State practically worked only about one-half time during the year.

The mines located in Athens, Meigs, Lawrence, Gallia and Washington counties, only worked about one half time, owing to scarcity of orders. The mining industry in Carroll, Columbiana, Mahoning, Trumbull and Jefferson counties was reported to be good. The mines of Monroe, Belmont and Harrison counties worked about one third less time than in the year 1902. This was due to many large mines being opened up and the enlarging and installing with electrical machinery of old mines with a view of increasing their output, and the inability of railroads to furnish cars. The mines of the Massillon district worked about one-half time, while those of Medina County worked steady.

The number of miners reported employed for the year was 29,834, a gain of 2,221 over the previous one. This class of mine labor represents the men employed in mining and producing the coal either by the use of the pick or by machinery, while the day hands are those employed in assisting in the general operation of a mine and in preparing the coal for the market.

The counties employing the greatest number of miners are as follows: Athens, 4,294; Perry, 3,502; Jefferson, 3,437; Belmont, 3,106; Jackson, 2,707 and Guernsey, 2,340.

Twenty counties show gains in the number of miners employed, Jefferson showing a gain of 1,159; Belmont, 618; Guernsey, 424; Perry, 306; Athens, 251; Medina, 227 and Coshocton, 218.

Eleven thousand five hundred and sixty-two day hands were reported employed for the year 1903, an increase of 1,754 over 1902. Of

this number 7,253 were employed on the inside and 4,309 on the outside of the mines.

The counties showing the greatest gains in day hands are the following: Jefferson a gain of 580; Guernsey, 222; Belmont, 207; Perry, 137 and Tuscarawas, 125.

While the year 1903 may not have been as prosperous a one to the individual miner as the preceding one, yet taking the mining conditions in general today, and the benefit derived from the short hours, the miner of today enjoys greater rights and privileges and is better compensated than he was ten years ago, and has just cause for congratulation.

TABLE SHOWING THE NUMBER OF MINERS AND DAY HANDS EMPLOYED IN THE SEVERAL COUNTIES DURING 1903 AS COMPARED WITH 1902.

Counties.	No. miners employed during 1902.	No. miners employed during 1903.	Gain.	Loss.	No. day hands employed during 1902.			No. day hands employed during 1903.			Total.	
					Inside.	Outside.	Total.	Inside.	Outside.	Total.	Gain.	Loss.
Athens.....	4,043	4,294	251	.....	910	521	1,431	952	599	1,551	120	.....
Belmont.....	2,488	3,106	618	.....	459	263	722	588	341	929	207	.....
Carroll.....	466	428	.....	38	125	68	193	123	29	152	.....	41
Columbiana.....	992	1,029	37	.....	185	142	327	249	160	409	82	.....
Coshocton.....	469	687	218	.....	88	53	141	150	93	243	102	.....
Gallia.....	33	54	21	.....	7	3	10	8	8	16	6	.....
Guernsey.....	1,916	2,340	424	.....	676	198	874	826	270	1,096	222	.....
Harrison.....	428	487	59	.....	48	39	87	68	80	148	61	.....
Holmes.....	49	89	40	.....	4	6	10	14	15	29	19	.....
Hocking.....	1,882	1,810	.....	72	299	211	610	373	242	615	5	.....
Jackson.....	2,825	2,707	.....	118	1,086	384	1,470	1,082	414	1,497	27	.....
Jefferson.....	2,278	2,437	159	.....	283	281	564	588	556	1,144	580	.....
Lawrence.....	360	369	9	.....	60	33	93	69	36	105	12	.....
Mahoning.....	194	162	.....	32	34	29	63	28	25	53	.....	10
Medina.....	253	480	227	.....	45	23	68	33	29	62	.....	6
Meigs.....	450	531	81	.....	126	75	201	114	101	215	14	.....
Morgan.....	70	140	70	.....	10	10	20	31	18	49	29	.....
Monroe.....	5	6	1	.....	.....	1	1	1	.....	1	.....	.....
Muskingum.....	452	549	97	.....	56	41	97	57	50	107	10	.....
Noble.....	170	96	.....	74	20	23	43	34	13	47	4	.....
Perry.....	3,196	3,502	306	.....	745	429	1,174	785	526	1,311	137	.....
Portage.....	215	205	.....	10	64	39	103	58	40	98	.....	5
Scioto.....	22	20	.....	2	7	4	11	10	7	17	6	.....
Stark.....	1,861	1,820	.....	41	369	345	714	471	309	780	66	.....
Summit.....	222	96	.....	126	45	32	77	22	20	42	.....	35
Trumbull.....	31	25	.....	6	4	4	8	6	5	11	3	.....
Tuscarawas.....	1,777	1,806	29	.....	342	201	543	416	252	668	125	.....
Vinton.....	263	332	69	.....	46	34	80	59	41	100	20	.....
Washington.....	7	10	3	.....	3	2	5	3	2	5	.....	.....
Wayne.....	196	217	21	.....	41	27	68	34	28	62	.....	6
Total.....	27,613	29,834	2,740	519	6,287	3,521	9,808	7,253	4,309	11,562	1,857	103
		Gain	2,221							Gain	1,754	

NEW MINES OPENED, SUSPENDED AND ABANDONED.

During the year many new mines were opened up, a number of which will be operated on an extensive scale. Developments of many new mining properties were noticeable during the year, and purchases of numerous coal mining properties lead to the belief that the coal trade industry will be materially enlarged and the output increased for the coming year.

During the year 1903 eighty-six new mines were opened up. This was a decided decrease compared with the number that was opened up during the year 1902, showing a decrease of nineteen. The year 1902 occupied a conspicuous position in the coal industry, the demand for bituminous coal exceeding that of any year since it was first mined, and was due to the anthracite coal strike between the miners and operators of the State of Pennsylvania causing these mines to be idle a number of months, and creating a famine of this class of fuel, and creating an abnormal demand for bituminous coal. The demand being so great caused prices to reach a point unheard of, and investors of capital thought they saw before them the opportunity to reap a harvest from this source and rushed into the market and purchased thousands of acres of coal land, but after the settlement of the anthracite strike, and the market in due time resumed its normal condition, it was evidenced that there was on the market an over production of coal. This naturally caused a decline in prices, and many mines were forced to suspend operations, especially those concerns that were unable to cope with the severe competition. In order to mine coal at a good profit at the present time, it is necessary that the most economical methods be practiced in its production and in preparing it for the market.

Forty-two mines suspended a portion or the whole of the year, a decrease of nineteen when compared with the preceding year. The same decrease in the number opened up and the number suspended is shown. Eighteen mines were entirely worked out or abandoned for various reasons. The number of abandoned mines during the year shows a decided decrease over the year 1902, when forty-eight were abandoned, while the number during 1903, was only eighteen, showing a decrease of thirty.

Belmont County reported the greatest number of new mines opened up, thirteen in all; Stark, eleven; Jefferson, nine; Tuscarawas, nine; and Muskingum and Athens each six.

Noble County reported the greatest number of suspended mines, ten in all ceasing operations for the year; Muskingum reported five suspended mines; Harrison, four, and Athens, Columbiana, Lawrence and Mahoning, each three.

The number that were reported to be either entirely worked out or abandoned from unfavorable conditions, was eighteen. Four of this number are attributed to Jackson, Stark and Wayne two each, and one each by ten other coal producing counties.

A detailed list of mines which were opened up, suspended and abandoned for the year 1903 follows.

TABLE SHOWING THE NUMBER OF MINES OPENED, SUSPENDED AND
ABANDONED DURING THE YEAR.

Counties.	Opened.	Suspended.	Abandoned.
Athens	6	3	.....
Belmont	13	1	1
Carroll	2	.....	1
Columbiana	4	3	.....
Coshocton .....	.....	.....	1
Gallia	1	.....	.....
Guernsey	5	2	1
Harrison	1	4	.....
Holmes	1	.....	.....
Hocking	3	.....	1
Jackson	2	.....	4
Jefferson	9	.....	.....
Lawrence	5	3	1
Mahoning .....	.....	3	1
Medina .....	.....	.....	1
Meigs	2	1	1
Morgan .....	.....	.....	.....
Monroe .....	.....	.....	.....
Muskingum	6	5	1
Noble	1	10	.....
Perry	3	2	.....
Portage .....	.....	.....	.....
Scloto .....	.....	.....	.....
Stark	11	2	2
Summit .....	.....	.....	.....
Trumbull .....	.....	.....	.....
Tuscarawas	9	2	.....
Vinton .....	.....	1	.....
Washington .....	.....	.....	.....
Wayne	2	.....	2
Total	86	42	18

**DETAILED LIST OF NEW MINES OPENED, SUSPENDED AND
ABANDONED DURING THE YEAR.**

ATHENS COUNTY.

New Mines.	Suspended.	Abandoned.
Number 255..... Luhrig No. 3..... Shingler..... Moor..... Kimberly No. 8..... Doanville No. 2.....	Black Diamond..... Utley No. 2..... Vernon Patch.....	

BELMONT COUNTY.

New Mines.	Suspended.	Abandoned.
Crescent No. Six..... Kings Run..... Flushing..... Delora No. 2..... Neff..... Moores Run..... Troll No. One..... Troll No. Two..... Lydia..... Summit No. One..... Summit No. Two..... Lansing..... New Shaft.....	Electric Light & Power Co..	Taggart.....

CARROLL COUNTY.

New Mines.	Suspended.	Abandoned.
Big Vein..... Starkey No. 3.....		Davis Number Six.....

COLUMBIANA COUNTY.

New Mines.	Suspended.	Abandoned.
Prospect Hill No. 3.....	Peter Klein.....	
Farquhar.....	Jonathan Mollenkopf.....	
Burnett.....	Foster.....	
Neiheisel.....		

COSHOCOTON COUNTY.

New Mines.	Suspended.	Abandoned.
		Conley Number Two....

GUERNSEY COUNTY.

New Mines.	Suspended.	Abandoned.
Hazel.....	C. C. C.....	Pioneer No. 2.....
Cleveland Number One ...	E. Barton.....	
Union Number One.....		
Euga.....		
Bell.....		

GALLIA COUNTY.

New Mines.	Suspended.	Abandoned.
Vinton.....		

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HARRISON COUNTY.

New Mines.	Suspended.	Abandoned.
.....	Sheets..... Hess..... Mattern..... Sherer.....	

HOLMES COUNTY.

New Mines.	Suspended.	Abandoned.
.....		

HOCKING COUNTY.

New Mines.	Suspended.	Abandoned.
Hollow No. 1..... Hollow No. 2..... Nut.....		Coalgate.....

JACKSON COUNTY.

New Mines.	Suspended.	Abandoned.
s.....		Superior No. 5..... Superior No. 6..... Superior No. 7..... Eclipse.....

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JEFFERSON COUNTY.

New Mines.	Suspended.	Abandoned.
Portland..... O'Neil..... Hill top..... Amsterdam..... Dorothy..... Roby No. 3..... Roby No. 4..... Roby No. 5..... Block House.....		

LAWRENCE COUNTY.

New Mines.	Suspended.	Abandoned.
Black Fork No. 1..... Black Fork No. 4..... Black Fork No. 5..... Black Fork No. 6..... Ginn.....	Nancy..... Belfont No. 2..... Belfont No. 3.....	Belfont No. 2.....

MAHONING COUNTY.

New Mines.	Suspended.	Abandoned.
	Terrell..... Wilderson..... Neff.....	Stouffer.....

MEDINA COUNTY.

New Mines.	Suspended.	Abandoned.
		Card No. 3.....

MEIGS COUNTY.

New Mines.	Suspended.	Abandoned.
Hobison..... Russell & Taylor.....	Charter Oak.....	Syracuse Shaft.....

MUSKINGUM COUNTY.

New Mines.	Suspended.	Abandoned.
Dewey No. 7..... Neil..... Maynard's No. 7..... John German..... Kings No. 1..... Sprague.....	Wortman..... Chas. Barton..... Wm. Temple..... C. C. Horner..... W. F. Trimble.....	Dewey No. 2.....

NOBLE COUNTY.

New Mines.	Suspended.	Abandoned.
Bell Valley.....	B. T. Crum..... Jno. Daniels..... H. D. Miller..... Fletcher Markey..... Andrew Poling..... W. H. Ullman..... Theo. Boyd..... I. R. Vance..... Wm. Love..... Theo. Wilson.....	

PERRY COUNTY.

New Mines.	Suspended.	Abandoned.
Tysor..... W. P. Rend's..... Iron Valley.....	Number Thirteen..... Jno. Murphy.....	

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STARK COUNTY.

New Mines.	Suspended.	Abandoned.
No. 17.....	Ike Slusser.....	Number 11.....
No. 18.....	G. Cartwright.....	Woodland.....
Elm Run No. 5.....		
Elm Run No. 6.....		
South Massillon.....		
East Massillon.....		
Davis No. 2.....		
Whittacre 5 and 6.....		
Bramley.....		
East End.....		
St. Elmo.....		

TUSCARAWAS COUNTY.

New Mines.	Suspended.	Abandoned.
Royal Coal Co. No. 2.....	Dennison.....	
Beaver.....	David Dunlavey.....	
Egypt No. 1.....		
North Goshen.....		
Beaver Dam No. 2.....		
Goshen Hill.....		
Akin.....		
Graves.....		

VINTON COUNTY.

New Mines.	Suspended.	Abandoned.
	Oreton.....	

WAYNE COUNTY.

New Mines.	Suspended.	Abandoned.
West Lebanon No. 2.....		Billman.....
Colonial.....		Boak.....

INSPECTIONS OF MINES MADE DURING THE YEAR 1903.

One thousand five hundred and eleven visits were made to the various mines of the State by the several District Mine Inspectors connected with the Mining Department. The State is divided into seven mining districts composed of the various counties in which coal, limestone, fire clay and iron ore are mined. Thirty counties in all report coal as being mined. The number of visits made to the mines by the District Inspectors did not number as many by ninety-nine as compared with the previous year.

Two vacancies also occurred in the personnel of the inspection staff, two new inspectors being appointed to fill them, the result of which is always noticeable in changes of this nature, as a great deal of the time of a new inspector is taken up with familiarizing himself with the respective duties connected with the inspection of mines, and the details associated with the work in general.

The several District Inspectors in their detailed report of mines entrusted to their care and supervision, all give expression of the friendly relations existing between both miners and operators and themselves. While it was necessary at times to close down a mine or to cease operations for a time, owing to unsanitary conditions, or a violation of the mining laws, these cases were very rare, and mine managements on the whole are at all times ready and willing to co-operate with the District Inspectors or to carry out any suggestions made by them which would better their mines and make them safe for the miners. Experience has shown that only with the highest and best methods of mining, and the proper care and protection of the men employed in the mines as to good ventilation, and so far as possible, to supply them with all ready material to prevent accidents, or dire calamity, pays in the end, and increases the tonnage of the mines many times more than the cost of the divers improvements.

Of the 912 mines that were reported to be in operation, 233 were visited once; 122, two times; 89, three times; 61, four times; 46, five times; 20, six times; 11, seven times; 6, eight times; 2, nine times and 3 ten times. Ten visits were made to the Phoenix No. 2 mine located in Athens County, by District Mine Inspector D. H. Williams, four of which were made for the purpose of testing the scales. The La Belle mine located in Jefferson County was also visited ten times by Inspectors McGough and Davis. This mine has been the cause of great anxiety

to the Department the whole of the inspection year as the mine generates considerable gas, and employs a great number of foreigners who are ignorant of the danger of this most deadly foe of the miner who delves under the ground for a livelihood, especially are they grossly ignorant in their manner of handling explosives, the dangers arising from such practice, being only too apparent to the intelligent miner where gas is known to exist. Conditions became such as to make it necessary to insist upon the use of safety lamps in working the mine, but notwithstanding this precaution on September 21st, there was an explosion of gas at this mine in which eight men were seriously burned, two of which later resulted fatally. On October 13th, when the mine was again visited by Inspector James P. Davis, no men were found working on either the east or west side since the explosion of September 21st; it was necessary at this time to remove three men out of one working place until the fan was put in operation. On November 6th the date of the last inspection for the fiscal year 1903, the mine was visited by Mr. Davis, but nothing was being done except repair work, brick brattices being installed throughout the mine. The New Shaft mine located in Columbiana County was also inspected ten times during the year.

In Perry County 185 visits were made; in Stark, 175; Athens, 132; Belmont, 109 and Jefferson 108, these counties leading in the number of visits made.

In the First District 188 visits were made by R. M. Mason and his successor Mr. Ed Smith. One hundred and fifty seven visits were made by R. M. Mason and 31 by Mr. Smith. This district is composed of the counties of Hocking, Jackson, Scioto and Vinton. The inspections made by Mr. Smith date from August 15 to November 15, 1903, the close of the fiscal year.

D. H. Williams in charge of District No. 2 made during the year 202 visits to the mines of this district which is composed of the counties of Athens, Gallia, Lawrence, Meigs, and Washington.

In the Third Mining District composed of the counties of Muskingum, Morgan, Noble and Perry, 245 visits were made by Inspectors D. B. Wilson, and Jno. Winefordner, the latter assuming the duties of the District on June 9th and making in all 86 visits from that date to November 15th. One hundred and fifty-nine visits are credited to Mr. Wilson from November 15, 1902 up to June 9th, 1903.

One hundred and sixty-nine visits were made in the Fourth Mining District in charge of Thos. McGough, which is composed of the counties of Monroe, Belmont, Harrison, and a portion of Jefferson.

The Fifth Mining District received 231 visits, in charge of W. H. Turner and embracing the counties of Guernsey, Coshocton and Tuscarawas.

Jas. P. Davis, Inspector for the Sixth Mining District, reported 229

mines visited in the counties of Columbiana, Trumbull, Mahoning and Portage.

The Seventh Mining District embracing the counties of Medina, Stark, Summit, Wayne and Holmes reported 247 visits made by Inspector W. H. Miller.

On January 14, 1903, the Hill mine located in Jefferson County, Ohio, and owned by R. S. Hill, Steubenville, Ohio, was inspected by Inspectors McGough and Davis. A fire originated in this territory several years back, and two years previous to this visit instructions were given by District Inspector Thos. McGough to seal the mine up. This was done, but upon its being re-opened up in November, 1902, it was found that the fire had not been entirely extinguished. It was visited again on March 27th and reported to be still on fire; also again on July 17th, at which time the fire was found to be still raging and had travelled one hundred feet during the past year in the solid coal, notwithstanding men were kept fighting it all the time. This visit was made in company with the Chief Inspector, McGough and Davis. The fire was raging fiercely. A new opening has been started with a view of heading off the fire, which together with suggestions made by the chief and associate inspectors, it is believed the fire can be extinguished. This has been a very expensive fire and is the only number eight seam of coal in this neighborhood that was being worked. The Jefferson mine owned by the Electric Traction Co., Steubenville, Ohio, and the Wilson mine owned by H. L. Wilson, Steubenville, Ohio, were also visited by the District Inspectors, which are located in close proximity to the Hill mine which was on fire, but no indications of any fire in these mines were found.

On May 15th and 16th, 1903, No. 69 mine owned by Call & Hughes, New Straitsville, Ohio, was inspected by District Mine Inspector D. B. Wilson to investigate a fire which had been burning in the mine for over a week. It appeared that there was not enough interest manifested in the matter to report it to the Department, and had it received immediate attention it could have been saved, but the present indications are that it has gone too far to save it.

TABLE SHOWING THE NUMBER OF VISITS MADE IN EACH COUNTY DURING THE YEAR.

Counties.	Number of mines visited once.	Number of mines visited twice.	Number of mines visited three times.	Number of mines visited four times.	Number of mines visited five times.	Number of mines visited six times.	Number of mines visited seven times.	Number of mines visited eight times.	Number of mines visited nine times.	Number of mines visited ten times.	Totals.
Number of visits.....	1	2	3	4	5	6	7	8	9	10	
Athens	15	7	8	4	3	4	2	...	...	1	133
Belmont	18	8	5	3	3	3	1	1	...	...	109
Carroll	7	5	3	1	2	1	...	...	...	...	53
Columbiana	17	8	9	1	1	...	1	1	...	1	94
Coshocton	5	8	4	...	...	...	...	...	...	...	33
Gallia	2	1	...	...	...	...	...	...	...	...	4
Guernsey	6	3	7	3	3	1	1	1	1	...	90
Harrison	4	3	...	...	...	...	...	...	...	...	10
Holmes	8	1	...	...	...	...	...	...	...	...	10
Hocking	5	4	...	...	5	1	2	...	1	...	67
Jackson	14	18	8	2	1	1	1	...	...	...	100
Jefferson	16	8	8	5	3	...	1	...	...	1	108
Lawrence	17	...	1	...	...	...	...	...	...	...	20
Mahoning	9	1	1	...	...	...	...	1	...	...	22
Medina	1	...	2	3	1	...	...	...	...	...	24
Meigs	6	4	4	3	1	2	...	...	...	...	55
Morgan .....	...	1	1	...	...	...	...	...	...	...	5
Muskingum	19	7	3	2	1	...	...	...	...	...	55
Noble .....	...	...	1	...	...	...	...	...	...	...	3
Perry	14	11	7	15	7	3	1	1	...	...	185
Portage	1	1	1	1	...	...	...	...	...	...	10
Scioto	2	...	...	...	...	...	...	...	...	...	2
Stark	15	8	7	12	11	2	...	1	...	...	175
Summit .....	...	...	...	...	1	...	...	...	...	...	5
Trumbull .....	...	...	...	...	...	...	...	...	...	...	...
Tuscarawas	26	14	6	4	2	1	...	...	...	...	104
Vinton	1	1	1	1	...	...	...	...	...	...	10
Washington .....	...	...	...	...	...	...	...	...	...	...	...
Wayne	5	...	2	1	1	1	...	...	...	...	26
Total.....	233	122	89	61	46	20	11	6	2	3	1,511

TABLE SHOWING THE NUMBER OF VISITS MADE IN EACH DISTRICT DURING THE YEAR

Districts.	Number of mines visited once.	Number of mines visited twice.	Number of mines visited three times.	Number of mines visited four times.	Number of mines visited five times.	Number of mines visited six times.	Number of mines visited seven times.	Number of mines visited eight times.	Number of mines visited nine times.	Number of mines visited ten times.	Totals.
Number of Visits.	1	2	3	4	5	6	7	8	9	10	
First district	40	12	12	7	4	5	2	....	....	1	202
Second district	22	23	10	3	6	3	3	....	1	....	188
Third district	33	19	11	17	8	3	1	1	....	....	245
Fourth district	32	13	12	5	5	3	1	1	....	....	172
Fifth district	38	25	17	7	5	2	1	1	1	....	228
Sixth district	42	24	16	7	4	1	3	2	....	1	239
Seventh district	28	8	11	16	14	3	....	1	....	....	237
Totals	235	124	89	62	46	20	11	6	2	2	1,511

SCALES TESTED DURING THE YEAR.

The testing of weigh scales, as one of the numerous duties of the District Mine Inspector, is becoming to the Department more of a problem each year, as the requests for inspectors to go to mines for the purpose of making scale tests is increasing each year, while the number tested and found inaccurate, or out of order, are only comparatively very few, 31 out of the entire number of sets of scales tested (188), in the year 1903 were found to be out of order. A great deal of this testing of scales is unnecessary, and is a great source of expense and annoyance to the Inspector, as only a limited number of test weights are provided for each mining district, and in consequence these have often to be shipped long distances, causing delay and idleness of the mine effecting both the interests of the miner and operator. A remedy for this state of affairs is suggested by District Mine Inspector, Thos. McGough, in his editorial letter to the Chief of this Department, which we believe if acted upon by the owners of mines will do much to correct the evils of this over-much-imposed-upon provision of the mining law, the intent of which was to protect the miner from being deprived from the rightful amount of coal mined by him, but this wise provision of the mining law should not be taken advantage of to the extent it now is, especially in view of the results obtained from the testing of scales where disputes arise as to their accuracy or inaccuracy, the number found correct being 83 1-2 per cent. of the total number tested. Mr. McGough suggests that two test weights be kept on the tippie to be provided by either the State or the Operator, or if several mines are in close proximity, they could be centrally located, and in case a dispute arises as to the accuracy of any of the scales at these mines the question could be settled in many cases without the assistance of an inspector, as the check-weighman in conjunction with the operator and the mine committee could make the test.

Several instances have occurred in which it was necessary to secure the services of an expert to place scales in proper weighing order as reported by the several Inspectors. On December 4, 1902, Inspector D. H. Williams, tested the scales of the Jobs No. 17 mine owned by the Continental Coal Co. in Athens County, and found them weighing in favor of the company, and requested them repaired. Visited the mine again on December 9th and found them partially repaired and

requested the company to get a regular scale man to repair them. On January 12, 1903, the Phoenix No. 2 mine owned by the same company, reported their scales out of order and were tested by Mr. Williams and found to be somewhat out of repair owing to their being packed with dirt and frost, and requested them cleaned. On January 30th they were again tested and found incorrect and requested that they be repaired by an expert.

At this same mine on March 14th one set of railroad scales were found correct, and again on September 28th one set of railroad scales were found correct but the other scales were found incorrect and they were ordered repaired. On February 2nd the scales of the Portland mine located in Jefferson County were tested by Mr. McGough, and found them wrong in their construction, but after several changes they were made satisfactory. On May 12th they were again reported out of order and the company was advised to get an expert, an average weight being fixed for the men to work by until they were repaired. On March 14th the scales of the Hemlock mine owned by the Buckeye Coal & R'y. Co. were tested by D. B. Wilson, and found accurate, but somewhat slow in working due to two of the bearings being a little out of place. A scale man was sent for to over-haul them. On May 29th, the scales of the Beaver Dam No. 1 mine, owned by the Beaver Dam Coal Co., located in Tuscarawas County were tested by District Inspector W. H. Turner, and found inaccurate and advised the services of an expert.

On December 12th, 1902, D. B. Wilson was called to measure the mine cars of the Northwest mine owned by the Northwest Coal Co., Toledo, Ohio, as the cars were being used until the scales were put in. The cars measured 6 ft. 10 in. long; 3 ft. 4 and 1-2 in. wide and 3 ft. 5 in. high. On October 8th, Inspectors D. H. Williams and Jno. Winefordner measured the cars of the Jones No. 14 mine, Perry County, owned by the Jones Coal Co., New Straitsville, Ohio.

Stark County reported 37 scale tests; Jefferson, 22; Athens and Perry 18, and Belmont 17. A detailed list of scale tests by counties follows.

DETAILED LIST OF SCALES TESTED FROM NOVEMBER 15, 1902, TO NOVEMBER 15 1903

ATHENS COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By whom tested.	Results.
1902				
Nov. 20	West Floodwood.....	G. C. Silcott, Nelsonville, Ohio.....	D. H. Williams.....	Found correct.
Dec. 4	No. 17.....	Continental Coal Co., Columbus, Ohio.....	".....	Found incorrect.
Dec. 9	No. 17.....	Continental Coal Co., Columbus, Ohio.....	".....	Found correct.
1903				
Jan. 12	Phoenix No. 2.....	Continental Coal Co., Columbus, Ohio.....	D. H. Williams.....	Two sets found incorrect.
Jan. 30	Phoenix No. 2.....	Continental Coal Co., Columbus, Ohio.....	".....	Two sets found Incorrect.
Mar. 14	Phoenix No. 2.....	Continental Coal Co., Columbus, Ohio.....	".....	Found correct.
May 21	Oakdale.....	Continental Coal Co., Columbus, Ohio.....	".....	Two sets found correct.
June	No. 10.....	Sunday Creek Coal Co., Columbus, Ohio.....	".....	Two sets found correct.
Aug. 10	Doanville.....	C. & H. C. & I. Co., Columbus, Ohio.....	".....	Two sets found correct.
Sept. 25	Oakdale.....	Continental Coal Co., Columbus, Ohio.....	".....	Two sets found correct.
Oct. 15	Hippel.....	Hippel Coal Co., Coalton, Ohio.....	".....	Correct.
Oct. 21	Halbert.....	Shaffer Coal Co., Nelsonville, Ohio.....	".....	Correct.

BELMONT COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By whom tested.	Results.
1902				
Nov. 17	Pultney.....	Pultney Coal Co., Bellaire, Ohio.....	Thos. McGough.....	Found correct.
1903				
Jan. 23	Schick.....	M. J. Schick & Co., Bellaire, Ohio.....	"	Found correct.
Jan. 27	Maple Hill.....	Youghiogeny & Ohio Coal Co., Barton, O....	"	Found correct (2 sets).
Feb. 12	Aetna Standard.....	American Sheet Steel Co., Bridgeport.....	"	Found correct.
Feb. 13	Boggs.....	E. N. Boggs Coal Co., Barton, Ohio.....	"	Found correct.
Feb. 23	Crescent No. 2.....	Lorain Coal & Dock Co., Columbus, Ohio....	"	Found correct.
May 20	Wheeling Creek.....	Lorain Coal & Dock Co., Columbus, Ohio....	"	Found correct (2 sets).
May 21	Maple Hill.....	Youghiogeny & Ohio Coal Co., Barton, O....	"	Found correct (2 sets).
June 12	Glen.....	Belmont Coal Co., Pittsburgh, Pa.....	"	Correct.
June 18	Barton.....	Youghiogeny & Ohio Coal Co., Barton, O....	"	Correct.
July 1	Cochran.....	W. A. Werner, Zanesville, Ohio.....	W. H. Turner.....	Correct.
Aug. 19	Gaylord.....	Pittsburgh & Cleveland Coal Co., Cleveland, O	Thos. McGough.....	Correct.
Sept. 10	Taggarts No. 2.....	Barton Coal Co.....	"	Correct.
Oct. 14	Lydia.....	Purseglove Coal Co., St. Clairsville, Ohio....	"	Slightly out of order.
Oct. 20	Pultney.....	Pultney Coal Co., Bellaire, Ohio.....	"	Found correct.

SCALES TESTED—Continued.
CARROLL COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By whom tested.	Results.
1902 1903	Beatty.....	National Fire Proofing Co., Magnolia, Ohio....	Jas. P. Davis.....	Found correct.
Feb. 3	Davis No. 6.....	Sherrodsville Coal Co., Sherrodsville.....	Jas. P. Davis.....	Found incorrect.
Feb. 4	Somers No. 2.....	Somers Mining Co., Cleveland, Ohio.....	"	Found incorrect.
Apr. 23	Somers No. 3.....	Somers Mining Co., Cleveland, Ohio.....	"	Found incorrect.
May 15	Somers No. 3.....	Somers Mining Co., Cleveland, Ohio.....	"	Found incorrect.
June 11	Linden No. 2.....	Davis R. R. Co., Canton, Ohio.....	"	Found correct.
June 19	Somers No. 3.....	Somers Mining Co., Cleveland, Ohio.....	"	Found correct.
July 23	Somers No. 3.....	Somers Mining Co., Cleveland, Ohio.....	"	Found correct.
Oct. 8	Somers No. 2.....	Somers Mining Co., Cleveland, Ohio.....	"	Found correct.

COLUMBIANA COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By whom tested.	Results.
1902 1903	McNabb Shaft.....	McNabb Coal Co., Salem, Ohio.....	Jas. P. Davis.....	Found correct.
Mar. 24	New Shaft.....	Big Vein Coal Co., Cleveland, Ohio.....	"	Found correct.
Mar. 27	Cedar Hill.....	Big Vein Coal Co., Cleveland, Ohio.....	"	Found correct.

COSHOCTON COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By whom tested.	Results.
1902				
Nov. 26	Best Coal Co.,.....	Best Coal Co., Columbus, Ohio.....	W. H. Turner.....	Found correct.
1903				
Jan. 23	Morgan Run No. 3.....	Morgan Run Coal Co., Cleveland, Ohio.....	"	Found correct.
Jan. 23	Wade.....	Wade Coal Co., Cleveland, Ohio.....	"	Found correct.
June 11	Arnold.....	Arnold Coal Co., Columbus, Ohio.....	"	Found correct.

GUERNSEY COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1902				
Dec. 18	Forsythe.....	Forsythe Coal Co., Danford, Ohio.....	W. H. Turner.....	Found correct.
Dec. 29	Kingston.....	Morris & Guild Coal Co., Cleveland, Ohio....	"	Found correct (3 sets).
1903				
Apr. 9	Murray Hill.....	Akron Coal Co., Akron, Ohio.....	"	Found inaccurate—ordered [repaired.
Apr. 27	Kingston.....	Morris & Guild Coal Co., Cleveland, Ohio....	"	Found accurate. (2 sets).
May 4	Ideal.....	Wills Creek Coal Co., Detroit, Mich.....	"	Found accurate.
May 5	Kingston.....	Morris & Guild Coal Co., Cleveland, Ohio....	"	Found accurate.
Aug. 4	Forsythe.....	Forsythe Coal Co., Cambridge, Ohio.....	"	Found accurate.
Aug. 10	Hartford.....	Ellsworth Coal Co., Cleveland, Ohio.....	"	Found accurate.
Sept. 23	Ideal.....	Wills Creek Coal Co., Detroit, Mich.....	"	Found accurate (2 sets).
Sept. 24	Nicholson.....	Ohio Coal Co., Cambridge, Ohio.....	"	Found inaccurate—ordered re [paired.
Oct. 27	Kingston.....	Morris & Guild Coal Co., Cleveland, Ohio....	"	Found accurate.
Oct. 30	Kingston.....	Morris & Guild Coal Co., Cleveland, Ohio....	"	Found accurate.

SCALES TESTED—Continued.

HARRISON COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 Mar. 5 July 9 Oct. 28	Roby No. 1..... Tippecanoe..... Clover Leaf.....	Roby Coal Co., Cleveland, Ohio..... Tippecanoe Coal Co., Cleveland, Ohio..... Cuyahoga Coal Co., Cleveland, Ohio.....	Thos. McGough..... "..... ".....	Found accurate (2 sets). Found accurate. Found accurate.

HOCKING COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 May 5 May 23 June 5	Beattie..... New Pittsburgh No. 3..... New Pittsburgh No. 6.....	Beattie Bros., Nelsonville, Ohio..... New Pittsburgh Coal Co., Columbus, Ohio.... New Pittsburgh Coal Co., Columbus, Ohio.....	R. M. Mason..... "..... ".....	Found accurate. Found accurate. Found accurate.

WAGASHAW COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903				
Feb. 25	Tibbals.....	W. Tibbals & Co., Jackson, Ohio.....	R. M. Mason.....	Found inaccurate.
Mar. 5	Acorn Slope.....	Jones Coal Co., Jackson, Ohio.....	".....	Found accurate.
May 6	Star.....	Star Coal Co., Jackson, Ohio.....	".....	Found inaccurate.
May 14	Star.....	Star Coal Co., Jackson, Ohio.....	".....	Found accurate.
Aug. 25	Alma.....	Alma Coal Co., Glen Roy, Ohio.....	Ed. S. Smith.....	Found accurate.
Aug. 26	Wainwright.....	Wainwright Coal Co.....	".....	Found inaccurate.
Sept. 23	Springfield.....	Chapman Coal Co., Jackson, Ohio.....	".....	Found accurate.
Nov. 10	Rottinghouse.....	Rottinghouse Coal Co., Jackson, Ohio.....	".....	Found accurate.

SCALES TESTED—Continued.

JEFFERSON COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1902 Dec. 16	Dillon No. 2.....	W. & L. E. Coal Co., Cleveland, Ohio.....	Thos. McGough.....	Found correct (2 sets).
1903 Jan. 9	Russell.....	Russell Coal Co., Tiltonville, Ohio.....	"	Found correct.
Jan. 19	Brilliant.....	Geo. A. Laughlin, Brilliant, Ohio.....	"	Found correct.
Jan. 30	Dillon No. 2.....	W. & L. E. Coal Co., Cleveland, Ohio.....	"	Found correct (2 sets).
Feb. 2	Portland.....	Portland Coal Co., Portland, Ohio.....	"	Found incorrect.
Feb. 3	Long Run.....	W. & L. E. Coal Co., Cleveland, Ohio.....	"	Found correct (2 sets).
Feb. 9	Conner.....	W. & L. E. Coal Co., Cleveland, Ohio.....	"	Found correct.
Feb. 26	McFayden.....	Wayne Coal Co., Carmen, Ohio.....	"	Found correct.
May 12	Portland.....	Portland Coal Co., Portland, Ohio.....	"	Found incorrect.
May 25	Long Run.....	W. & L. E. Coal Co., Cleveland, Ohio.....	"	Found correct (2 sets).
July 1	O'Neil.....	O'Neil Coal Co., Adena, Ohio.....	"	Found correct.
July 1	Zerbe.....	O. & P. Coal Co., Cleveland, Ohio.....	Jas. P. Davis.....	Found correct.
July 2	Jumbo.....	Salisbury Coal Co., Columbus, Ohio.....	"	Found correct.
Aug. 13	Long Run.....	W. & L. E. Coal Co., Cleveland, Ohio.....	Thos. McGough.....	Found correct.
Aug. 13	Long Run.....	W. & L. E. Coal Co., Cleveland, Ohio.....	"	Found incorrect.
Sept. 24	Jumbo.....	Salisbury Coal Co., Columbus, Ohio.....	Jas. P. Davis.....	Found correct.
Nov. 10	Conner.....	W. & L. E. Coal Co., Cleveland, Ohio.....	Thos. McGough.....	Found correct (2 sets).

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MAHONING COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 June 16 July 6	Greenamyer Shaft..... McKinley.....	Orr & Zimmerman, Salem, Ohio..... Lake Erie & Southern Coal Co., Cleveland, O	Jas. P. Davis.....	Found correct. Found correct.

MEigs COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 Nov. 4	Salisbury.....	Salisbury Coal Co., Columbus, Ohio.....	D. H. Williams.....	Found correct.

SCALES TESTED—Continued.
MUSKINGUM COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 Aug. 27 Oct. 12 Oc	Granger..... Mine No. 37..... Walnut Hill No. 1.....	The Siler Coal Co., McConnelsville, Ohio..... Maynard Bros., Columbus, Ohio..... Ohio & Michigan Coal Co., Detroit, Mich.....	John Winefordner.... "..... ".....	Found correct. Found incorrect—new set or- [dered]. Found correct.

LARKY COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1902				
Dec. 24	Iron Point No. 3.....	D. S. Richards & Co., Shawnee, Ohio.....	David B. Wilson.....	Found correct.
1903				
Jan. 5	Briar Hill.....	Middle States Coal Co., Columbus, Ohio.....	"	Found incorrect.
Mar. 14	Mine No. 20.....	Buckeye Coal & Railway Co., Columbus, O...	"	Found correct.
Mar. 24	Union North Side.....	Ohio Coal & Cement Co., Columbus, Ohio.....	"	Found correct.
Apr. 22	Hazleton.....	Geo. C. Gibbs, New Straitsville, Ohio.....	"	Found correct.
Apr. 24	XX No. 1.....	Taylor & Williams, Shawnee, Ohio.....	"	Found correct.
May 4	XX No. 2.....	Columbus Face Brick Co., Columbus, Ohio...	"	Found correct.
May 19	Spencer & Hazleton.....	Standard Hocking Coal Co., Chicago, Ill....	John Winefordner....	Found correct.
June 17	Randa.....	Geo. Gibbs, New Straitsville, Ohio.....	"	Found incorrect—200 lbs. in favor of Company.
July 16	Hazleton.....	Zanesville Coal Co., Zanesville, Ohio.....	"	Found correct.
Aug. 12	Keystone No. 1.....	Essex Coal Co., New Straitsville, Ohio.....	"	Found incorrect—200 lbs. in favor of Company.
Aug. 17	Essex.....	Continental Coal Co., Columbus, Ohio.....	"	Found correct.
Sept. 15	Congo No. 1.....	Continental Coal Co., Columbus, Ohio.....	"	Found correct.
Sept. 15	Congo No. 2.....	Jones Coal Co., New Straitsville, Ohio.....	"	Found correct.
Oct. 7	Jones No. 15.....	Essex Coal Co., New Straitsville, Ohio.....	"	Found correct.
Oct. 7	Essex.....	Jones Coal Co., New Straitsville, Ohio.....	"	Found correct.
Oct. 9	Jones No. 13.....	Sunday Creek Coal Co., Columbus, Ohio.....	"	Found correct.
Nov. 14	Lady Grange.....			

SCALES TESTED—Continued.

PORTAGE COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 Jan. 9	Mullin Shaft.....	Mullin Coal Co., Massillon, Ohio.....	Jas. P. Davis.....	Found correct.
Mar. 12	Mullin Shaft.....	Mullin Coal Co., Massillon, Ohio.....	"	Found correct.

STARK COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1902 Dec. 20	Tally Ho No. 11.....	Massillon Coal Mining Co., Massillon, Ohio....	W. H. Miller.....	Found correct.
1903 Jan. 22	Geise No. 13.....	Massillon Coal Mining Co., Massillon, Ohio....	"	Found correct.
Jan. 26	Canton Hollow Block.....	Canton Hollow Block Co., Canton, Ohio.....	"	Found inaccurate.
Feb. 12	Warwick No. 5.....	Massillon Coal Mining Co., Massillon, Ohio....	"	Found correct.
Mar. 17	Minglewood No. 1.....	Massillon Coal Mining Co., Massillon, Ohio....	"	Found correct.
Mar. 20	Castingham.....	Castingham Coal Co., Cleveland, Ohio.....	"	Found correct.
Mar. 25	North Massillon, No. 9.....	Massillon Coal Mining Co., Massillon, Ohio....	"	Two sets correct; one set in-
Apr. 21	Canton F. P. Co.....	Canton Fire Proofing Co., Canton, Ohio.....	"	Found inaccurate. [correct.
Apr. 22	Crescent.....	Crescent Coal Co., Alliance, Ohio.....	"	Found accurate.
Apr. 22	Canton Coal Mining Co.....	Canton Coal Mining Co., Canton, Ohio.....	"	Found incorrect.
May 2	Whip-poor-Will.....	Ringley & Townsend, Cleveland, Ohio.....	"	Two sets correct.
June 1	East Massillon.....	East Massillon Coal Co., Massillon, Ohio.....	"	Found correct.

June 8	Minglewood No. 2.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
June 11	Hipp.....	Massillon S. F. B. Co., Massillon, Ohio.....	"	.....	Found correct.
June 17	Tally Ho No. 11.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
June 27	Oakwood No. 16.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Two sets found correct.
June 28	Minglewood No. 1.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
Aug. 21	North Massillon No. 9.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
Aug. 27	Elm Run No. 2.....	Davis & Somers Coal Co., Canton, Ohio.....	"	.....	Two sets found correct.
Sept. 1	Pigeon Run.....	Massillon Pigeon Run Coal Co., Cleveland, O.	"	.....	Found correct.
Sept. 5	Central No. 7.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Two sets correct.
Sept. 9	Fox No. 12.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Three sets correct.
Sept. 10	No. 17.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found incorrect.
Sept. 12	Geise No. 13.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
Sept. 17	Eureka.....	South Massillon Coal Co., Massillon, Ohio.....	"	.....	Found correct.
Sept. 21	North Massillon.....	Massillon Cleveland Coal Co., Cleveland Ohio.....	"	.....	Found incorrect.
Sept. 23	Minglewood No. 1.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
Oct. 8	No. 15.....	Massillon Coal Mining Co., Massillon, Ohio.....	"	.....	Found correct.
Oct. 16	Stark.....	Davis & Somers Coal Co., Canton, Ohio.....	"	.....	Found correct.
Nov. 4	Hipp.....	Massillon S. & F. B. Co.....	"	.....	Found incorrect.

TUSCARAWAS COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1902				
Nov. 9	Goshen Hill.....	Goshen Hill Coal Co., Cleveland, Ohio.....	W. H. Turner.....	Found incorrect.
Nov. 13	Goshen Hill.....	Goshen Hill Coal Co., Cleveland, Ohio.....	"	Found correct.
1903				
Jan. 7	Midvale No. 3.....	Midvale, Goshen Coal Co., Cleveland, Ohio.....	"	Found accurate.
Jan. 31	East Goshen No. 1.....	East Goshen Coal Co., Cleveland, Ohio.....	"	Found accurate.
Jan. 31	East Goshen No. 2.....	East Goshen Coal Co., Cleveland, Ohio.....	"	Found accurate.
Jan. 10	Beaver Dam No. 1.....	Beaver Dam Coal Co., Cleveland, Ohio.....	"	Found accurate.
Aug. 5	Carbon Hill.....	Carbon Hill Coal Co., Toledo, Ohio.....	"	Found accurate.
Aug. 12	Goshen Central.....	Goshen Central Coal Co., Massillon, Ohio.....	"	Found accurate.
Aug. 12	Beaver Dam No. 1.....	Beaver Dam Coal Co., Cleveland, Ohio.....	"	Found accurate.

SCALES TESTED—Continued.

TRUMBULL COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 Oct. 19	Witch Hazel.....	Witch Hazel Coal Co., Youngstown, Ohio....	W. H. Miller.....	One set correct; one set incor.

VINTON COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1902 Dec. 18	Clarion.....	Gallia Mining Co., Clarion, Ohio.....	R. M. Mason.....	Found accurate.
1903 Jan. 14	Elk Fork.....	The Elk Fork Coal Co., Elk Fork, Ohio.....	"	Found accurate.

INSPECTOR OF MINES.

SCALES TESTED—Continued.
WAYNE COUNTY.

Date.	Name of Mine.	Name and P. O. Address of Company.	By Whom Tested.	Results.
1903 Feb. 6 May 18 Oct. 21	West Lebanon No. 1..... Stewart..... Stewart.....	West Lebanon Coal Co., Wooster, Ohio..... Card & Prosser Coal Co., Cleveland, Ohio..... Card & Prosser Coal Co., Cleveland, Ohio.....	W. H. Miller..... "..... ".....	Found correct. Found correct (2 sets). Found correct (2 sets).

TABLE SHOWING THE NUMBER OF SCALES TESTED, AND RESULT OF
THE EXAMINATION FROM 1887 TO NOVEMBER 15, 1903.

Years.	Number of sets of scales tested.	Number of sets found correct.	Number of sets found incorrect.	Remarks.
1887.....	74	.....	.....
1888.....	55	41	14	
1889.....	48	33	14	
1890.....	59	46	20	
1891.....	61	37	25	
1892.....	86	62	24	8 in favor of company, 6 in favor of miners.
1893.....	120	81	39	12 in favor of company. 3 in favor of miners.
1894.....	64	37	27	15 in favor of company, others not known.
1895.....	96	65	31	15 in favor of company, 14 in favor of miner
1896.....	93	65	28	5 against miner, 1 again operator.
1897.....	77	59	48	3 against miner, 3 against operator.
1898.....	99	82	17	4 against miner, 1 against operator.
1899.....	112	93	19	
1900.....	131	115	16	3 against miner, 1 against operator.
1901.....	139	115	24	
1902.....	154	131	23	
1903.....	188	157	31	
Totals...	1394	.....	.....

PERMANENT IMPROVEMENTS MADE DURING THE YEAR.

Permanent improvements to the number of 325 were made in the various mines of the State as compared with the preceding year, showing an increase of 22. Many new mines were opened up during the year and were equipped with all modern appliances and new and improved machinery.

In all 71 fans were placed in operation during the year, a gain of 12 as compared with the year 1902. The fan as a ventilating medium still leads, as it has long proven its superiority over other methods of ventilation in distributing the air current to the working places, especially where large areas have been worked out making it exceedingly difficult to ventilate.

Fifty-six furnaces were built in the mines of the State during the year, showing a gain of six over the previous year. Air shafts for improving the ventilation were made to the number of 94, a loss of four.

Nineteen stair-ways, and 49 second openings were made, a gain of 12 in the number of second openings made being shown. These were made with a view for better facilitating the means of egress and ingress in the mines in case of an explosion or any calamity that is likely to occur at any time. It is better always to be on the safe side and make an improvement even although it may at the time appear unnecessary, as some of our greatest disasters have occurred in mines which, on the surface, appeared to be conducted in a systematic and lawful manner.

Ventilating baskets to the number of nine were hung in air shafts for ventilating purposes. Numerous minor improvements such as breakthroughs made and doors hung and other details which go to make a mine better improved and in lawful condition were ordered by the several District Inspectors in their visits to mines, but space does not here permit of a detailed account of them.

Ten speaking tubes were inserted in the shafts of mines as a means of communication, and 17 safety catches applied on cages to guard against accidents that are likely to occur from this means of transporting the men to and from their work.

In District No. 1, in charge of R. M. Mason, 28 improvements were made, and for the time Mr. Ed. Smith was in charge, five more were made, making a total of 33.

In the Second Mining District under the supervision of D. H. Williams, 24 permanent improvements were made.

In the Third Mining District 21 improvements were made under the supervision of D. B. Wilson, and six under Mr. Jno. Winefordner.

In the Fourth Mining District in charge of Thos. McGough, 62 improvements were reported as follows: 8 furnaces, 17 fans, 17 airshafts, 16 second openings, 4 stairways and 2 ventilating baskets.

In the Fifth Mining District in charge of W. H. Turner, 78 were made, the largest number of improvements reported from any mining district for the year and are as follows:

Fifteen furnaces, 12 fans, 22 airshafts, 8 second openings, 7 safety catches, 5 speaking tubes and one ventilating basket.

Fifty-three were made in the district in charge of Jas. P. Davis, and 54 in District Number 7 which is under the supervision of W. H. Miller.

TABLE SHOWING THE NUMBER AND CHARACTER OF THE PERMANENT IMPROVEMENTS MADE IN THE MINES OF THE STATE DURING THE INSPECTION YEAR.

Name of District Inspector.	Furnaces.	Fans.	Air Shafts.	Second Openings.	Safety Catches.	Stairways.	Speaking Tubes.	Ventilating Baskets.	Totals.
R. M. Mason	6	10	12	.....	.....	.....	.....	.....	28
Ed. Smith	1	2	2	.....	.....	.....	.....	.....	5
D. H. Williams	3	9	5	1	.....	4	2	.....	24
John Winefordner ..	2	2	2	.....	.....	.....	.....	.....	6
D. B. Wilson	1	3	5	.....	.....	.....	.....	6	15
Thos. McGough	8	17	17	16	.....	2	.....	2	62
W. H. Turner	15	12	22	8	7	8	5	1	78
Jas. P. Davis	14	12	11	9	4	1	2	.....	53
W. H. Miller	6	4	18	15	6	4	1	.....	54
Totals	56	71	94	49	17	19	10	9	325

TABLE SHOWING THE NUMBER AND CHARACTER OF PERMANENT IMPROVEMENTS MADE IN THE MINES OF THE STATE FROM 1884 TO 1903, INCLUSIVE.

Years.	Furnaces.	Fans.	Air Shafts.	Second Openings.	Safety Catches.	Stairways.	Speaking Tubes.	Ventilating Baskets.	Totals.
1884	43	10	.....	.....	.....	.....	.....	.....	53
1885	45	19	45	.....	13	.....	.....	.....	122
1886	13	6	22	10	.....	12	.....	.....	63
1887	39	9	50	7	.....	8	.....	.....	113
1888	43	4	52	17	13	12	.....	.....	141
1889	42	13	57	21	7	3	3	.....	146
1890	57	20	66	46	8	11	4	.....	212
1891	53	17	55	26	19	19	5	.....	194
1892	37	26	65	27	13	7	4	2	181
1893	77	35	131	67	16	19	5	4	354
1894	55	18	106	60	7	11	3	9	269
1895	66	17	105	60	9	11	3	13	284
1896	56	21	93	81	5	7	3	14	280
1897	40	22	75	44	4	7	3	9	204
1898	44	17	73	45	7	11	1	15	213
1899	36	25	60	45	11	13	7	3	200
1900	24	27	69	31	1	9	1	8	170
1901	40	45	66	31	11	5	7	3	208
1902	50	59	98	37	21	20	10	8	303
1903	56	71	94	49	17	19	10	9	325
Totals	916	481	1,382	704	182	204	69	98	4,074

MINES WHICH GENERATE LIGHT CARBURETTED
HYDROGEN GAS.—(FIRE DAMP.)

As new mines are constantly being opened up piercing the coal measures at a greater depth, some of the shafts ranging from 180 to 190 feet in depth, at which depth treacherous fire-damp generates more freely, the number found to generate this greatest foe to the miner, is on the increase. In all 85 mines in the State during the year 1903 have been reported as showing or having evidence of the presence of fire-damp. This is an increase of 10 as compared with the preceding year. and occurs in the following counties: Number 255, Athens County, owned by the Continental Coal Co., Columbus, Ohio; Dellora No. 1 and 2, Belmont County, owned by Manufacturing Fuel Co., Glencoe, Ohio; Hazel mine, Guernsey County, owned by the Opperman Coal Co., Cambridge, Ohio; Cleveland No. 1, mine owned by the Cleveland-Somers Coal Co., Cleveland, Ohio. This mine was reported by Inspector W. H. Turner as generating large quantities of light carburetted hydrogen gas, but is rendered harmless by a large volume of air. He requested the management to place canvass in all places where gas was disposed to linger or lodge. The New Pittsburgh No. 1 mine, Hocking County, owned by the New Pittsburgh Coal Co., Columbus, Ohio; the Inspector was called to this mine on May 22nd and again on June 12th on account of the presence of gas and improvements were suggested to discharge the gas. In Jackson County, the Superior No. 9 mine owned by the Superior Coal Co., Jackson, Ohio; Amsterdam mine Jefferson County owned by the Amsterdam Coal Co., Cleveland, Ohio. This mine is reported by Inspector James P. Davis as a very gaseous and dangerous one, shots that are fired often igniting the gas, and on one occasion the gas became ignited by a shot setting fire to the coal necessitating the flooding of the mine. In Stark County the following new mines were reported to show the presence of fire damp—owned by the Massillon Coal Mining Co., Massillon, Ohio; Number 17, Stanwood No. 8 and Fox No. 12 mine; also Elm Run No. 6 mine owned by Davis & Somers Coal Co., Canton, Ohio.

In Tuscarawas County the Goshen Shaft mine owned by the Goshen Coal & Mining Co., Cleveland, Ohio. Also the Beaver Dam mine owned by the Beaver Dam Coal Co., Cleveland, Ohio; visited by Inspector W. H. Turner on May 29th and found to be generating fire damp. A notice was posted to the workmen forbidding them to enter the mine until it was examined.

The Syracuse Slope mine was visited on June 23rd and 24th by the Inspector and Deputy D. H. Williams, for the purpose of examin-

ing the mine in which an oil well had penetrated and from which gas was said to generate. A little gas was found at a distance of 320 feet west of the dark north on the seventeenth west entry in a high place in the roof. For the safety of both the Shaft and Slope Mines, which are connected, they requested the management to separate them by brattices, and to change the ventilation in the Slope mine so as to place the oil well on the return current of air; also to put a packer around the pipe in the well for the purpose of shutting off the gas from the mine, and also suggested that a fire boss be employed to inspect the Slope mine every day before the men enter the mine.

In the Walhounding mine in Guernsey County on October 15th two men lost their lives by a sudden flow of gas being released by an extensive fall where pillars had been removed.

On September 21st an explosion of gas occurred at the La Belle mine located in Jefferson County and owned and operated by The La Belle Iron Works Co., Steubenville, Ohio, in which eight men were seriously burned, and two persons, Nick Yurik and Frank Defk afterwards died from injuries received, at a hospital in Steubenville. An investigation was at once instigated and from the report made by Inspectors McGough and Davis it appears that there was a great deal of carelessness shown on the part of the men employed in the mine and in their use of safety lamps. The injured men were working on the second shift and had just entered the mine, not having yet commenced work. At the point where the explosion occurred the air had been measured on August 5th, and 9,600 cubic feet of air was found, but on the day following the explosion but 2,000 feet could be found. In the opinion of the Inspectors the company owning the mine have not been as solicitous of the safety of their employes as the conditions at this mine warrant, the testimony bearing out the fact that one of the miners struck a match which ignited the gas, causing the explosion, although had the required amount of air been in circulation as was found on August 5th, the Inspectors were satisfied the accident would not have occurred.

The coroner's finding is herewith given, and contains valuable suggestions that might well be taken advantage of to the betterment of protection of foreigners employed in the mines.

"I find that the deceased, Nick Yurik, came to his death on the 29th day of September, A. D., at the Gill Hospital, in the city of Steubenville, Jefferson County, Ohio, from burns and injuries received in an explosion of gas at the La Belle Iron Works Coal Co's. coal shaft in said city, on the 21st day of September, A. D., 1903."

The testimony adduced in this inquest shows that the gas had been ignited by Frank Defk (who also died from injuries), striking a match for some purpose. It further shows that the men had been warned of the presence of gas in the mine and to not strike matches at the place where the explosion occurred, they also being furnished with safety lamps for use in the mine.

The testimony of the District Mine Inspectors Messrs. McGough and Davis, also shows that there was not sufficient ventilation in the mine to render the gas harmless. Mr. Davis, the Inspector, who went down in the mine next morning after the explosion, found that at the place where the accident occurred there was only 2,500 cubic feet of air, where on his previous visit there was from nine to eleven thousand. Both Inspectors stating that in their opinion they should have at least ten to twelve thousand feet of air to dilute the gas sufficiently to provide against explosions, their opinion being that if there had been that amount of air this explosion would have not occurred. On a visit through the mine in company with Inspector Davis and Superintendent Duncan, I found that the brattices were leaking all along the air course, which helped to account for the insufficient ventilation. The fan at the shaft is capable of furnishing enough air if the air courses are in proper shape, and they certainly were not from the testimony of the Inspectors. The La Belle Iron Works Co., has always been willing and ready to spare no expense in providing everything asked for, for the protection of the men, but the testimony shows that the air courses were not in proper shape to convey a sufficient quantity of air to render the mine safe at the dangerous or gaseous parts.

There should certainly be a better system of ventilation in this mine to insure against a repetition of this explosion. The brattices shutting off the old workings and places where the air is not required should be made perfectly air tight in order that the dangerous and gaseous places should receive the greatest amount of air possible, and any other means that will improve the ventilation and safety of the mine should be used.

GEORGE A. CAMPBELL,
Coroner of Jefferson County.

**MINES WHICH GENERATE LIGHT CARBURETTED HYDROGEN GAS.
(FIRE DAMP.)**

	Athens County.	
No. 10.....	Luhrig No. 1.....	Modoc No. 281.....
No. 17.....	Luhrig No. 2.....	No. 16.....
No. 6.....	Luhrig No. 3.....	No. 4.....
Phoenix No. 2.....	No. 24.....	No. 23.....
Chauncey.....	No. 255.....	McLeish, No. 31.....
Oakdale.....		
	Belmont County.	
Captina.....	Wegee.....	Dellora No. 1.....
Schnegg.....		Dellora No. 2.....
	Carroll County.	
Heatherington Big Vein..		Somers No. 3.....
	Columbiana County.	
New Shaft.....	Slope No. 2.....	Cherry Valley.....
Pine Hill.....	Leetonia.....	McNab.....
Lisbon.....	Farquhar Shaft.....	Cedar Hill.....
Salem.....		
	Guernsey County.	
Old Orchard.....	Forsythe.....	Kings.....
Klondike.....	Black Top.....	Cleveland No. 1.....
Hartford.....	Imperial.....	Walhounding.....
Hazel.....	Cisco.....	Trail Run.....
Detroit.....	Ideal.....	Little Kate.....
Murray Hill.....		Central.....
	Jackson County.	
Wainwright.....	Superior No. 9.....	Fluhart No. 3.....
	Superior No. 6.....	
	Jefferson County.	
Brilliant.....	La Belle.....	High Shaft.....
West Pittsburg.....	Zerbe.....	Amsterdam.....
Rolling Mill No. 2.....		
	Mahoning County.	
Greenamyer Shaft.....	National.....	
	Noble County.	
Laura.....		
	Perry County.	
Santoy No. 1.....		Rend's No. 3 or 253.....
	Portage County.	
Hutson No. 4.....		Mullin Shaft.....
	Stark County	
Minglewood No. 1.....	Warwick No. 4.....	Pocock No. 3.....
Minglewood No. 2.....	Warwick No. 5.....	No. 17.....
New Greenville No. 3.....	Oakwood No. 16.....	Elm Run No. 6.....
Geise No. 13.....	Central No. 7.....	Fox No. 12.....
Stanwood No. 8.....	Woodland.....	Young's Shaft.....
	Tuscarawas County.	
Beaver Dam No. 1.....		Goshen Shaft.....

CHARACTER OF DEVELOPMENT AND MODE OF VENTILATION.

In opening new mining properties, instead of exerting every effort to produce coal in paying quantities in the shortest time, regardless of the injury that may be done by robbing and plundering around the bottom of a shaft or drift opening, the greatest care should be exercised to leave large blocks of coal to support the overlying stratas, and the prime object should be to so plan and lay out the advance headings and develop the property in such a way as to insure the best results so long as the mine is in operation. The mode and methods of ventilation and sanitary arrangements for the whole life of a mine should be foreseen by the management at the time of the opening and every precaution used to secure the greatest protection to the health and lives of those who labor therein.

Great improvement has taken place in this all important subject of mine ventilation within the past twenty or thirty years, and justly so for conditions have changed with the progress of time. Larger quantities of blasting material are used, many more men are employed, making it necessary to use large quantities of oil for lighting purposes, much of which is of an inferior quality; machinery has also been installed in the mines to a wonderful degree, while large quantities of gas which is to be found in so many of our mines tends to harass the ventilating current. With these new and changed conditions must come improvements in the method of ventilating the mines, and it devolves upon the united effort of not only the men employed therein, but all other classes of persons responsible for the well being of a mine, to assist in every possible way to maintain a sufficient volume of air as will conform to the mining laws regulating this phase of mine operations. We believe that the ventilation of the mines in the State of Ohio compares favorably with mines of other coal producing states, and receives the attention due it from the District Inspectors whose duty it is to suggest any improvement they may deem necessary to better conditions. At times it has been necessary to close a mine down for a short time or to remove the men from their working places, but these instances are more the exception than the rule.

As a mode of development statistics for the year 1903 show that 501 drifts were employed as a means of reaching the coal, 142 shafts and 140 slopes. Perry County exceeded in the number of shafts, reporting the use of 68; Belmont, 56; Tuscarawas and Muskingum each 54 and Jefferson, 51. Stark County reported a total of 37; Jackson, 24; Athens, 15; Guernsey, 14 and Mahoning, 8.

In the number of slopes Columbiana leads reporting the use of 17; Stark, 14; Athens, 12; Belmont, 11, and Jackson and Muskingum each 10.

There were in use as a means of ventilation in the mines of the State for the year 1903, 259 fans, an increase of 40 over the previous year. Jackson is credited with 39; Athens, 35; Jefferson, 30; Belmont, 29 and Perry and Stark 21 each.

Two hundred and forty-four furnaces were used in the mines during the year, a gain of 22 over 1902. These were in use in all of the coal producing counties with the exception of Monroe, Portage and Summit. Tuscarawas reported 34 in use; Belmont, 26; Muskingum, 21; Jackson, 19 and Perry, 18.

A loss of 13 in the number of fire baskets employed is shown from the reports received, 44 in all being in use as compared with 57 reported for the year 1902. Muskingum County reported the use of 8; Perry, 6; Hocking and Jackson 5 each and Tuscarawas, 4.

A loss in the number of steam jets is also shown, 13 less being in use during 1903, the total number being 32. In 1902, 45 were reported in use. Stark County reported 13; Medina, 7; and Perry and Summit 2 each. Three hundred and two mines have natural ventilation and the ventilation of 73 is unknown, although it is presumed that they have in use natural ventilation.

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION AND THE THREE KINDS OF OPENINGS.

Counties.	Character of Opening.					Mode of Ventilation.						
	Drift.	Shaft.	Slope.	Small mines, kind of openings unknown.	Totals.	Fan.	Furnace.	Fire basket.	Steam jet and exhaust from pump.	Natural.	Small mines, method of ventilation unknown.	Totals.
Athens	23	15	12	1	51	35	6	3	...	5	2	51
Belmont	56	5	11	2	74	29	26	...	...	17	2	74
Carroll	13	3	3	1	20	4	5	...	1	8	2	20
Columbiana	23	5	17	6	51	19	8	1	1	16	6	51
Coshocton	20	...	...	1	21	1	14	2	...	4	...	21
Gallia	4	1	...	...	5	...	3	...	...	2	...	5
Guernsey	12	14	8	2	36	19	4	2	...	8	3	36
Harrison	26	1	4	5	36	1	5	1	...	25	4	36
Holmes	12	...	...	1	13	...	5	...	...	7	1	13
Hocking	20	...	1	...	21	9	2	5	...	5	...	21
Jackson	29	24	10	3	66	39	19	5	...	1	2	66
Jefferson	51	4	3	3	61	30	11	...	...	16	4	61
Lawrence	22	...	...	5	27	1	9	...	...	12	5	27
Mahoning	6	8	8	4	26	5	7	...	1	13	...	26
Medina .....	...	1	8	1	10	...	2	1	7	...	...	10
Meigs	27	1	2	2	32	3	16	...	...	12	1	32
Morgan	1	...	1	...	2	1	1	...	...	...	...	2
Monroe	3	...	...	...	3	...	...	...	...	...	3	3
Muskingum	54	...	10	12	76	...	21	8	...	38	9	76
Noble	28	1	2	11	42	1	2	1	...	26	12	42
Perry	68	6	8	7	89	21	18	6	2	36	6	89
Portage .....	...	3	...	...	3	2	...	...	1	...	...	3
Scioto	3	...	...	...	3	...	1	...	...	2	...	3
Stark	21	37	14	7	79	21	15	2	13	21	7	79
Summit	2	3	4	...	9	1	...	1	2	5	...	9
Trumbull	1	1	2	1	5	...	2	1	...	2	...	5
Tuscarawas	54	1	7	4	66	9	34	4	...	16	3	66
Vinton	10	3	2	1	16	5	6	...	...	4	1	16
Washington .....	...	1	...	...	1	...	1	...	...	...	...	1
Wayne	2	4	3	1	10	3	1	1	4	1	...	10
Total	591	142	140	81	954	259	244	44	32	302	73	954

TABLE SHOWING THE NUMBER OF MINES EMPLOYING THE VARIOUS METHODS OF VENTILATION, AND THE THREE KINDS OF OPENINGS FROM 1892 TO 1903 INCLUSIVE.

Years.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903
Drifts	303	676	657	749	821	800	921	789	696	625	589	591
Shafts	91	121	149	150	149	153	143	145	122	133	140	142
Slopes	40	61	61	68	66	85	145	133	140	149	142	140
Small mines, kind of opening un- known ..	458	151	296	220	167	190	46	65	114	99	96	81
Totals ..	892	1009	1163	1187	1203	1228	1255	1132	1072	1006	967	954
Fans	127	141	139	134	134	149	149	147	171	182	219	259
Furnaces ..	253	323	264	278	281	280	317	274	264	253	222	244
Fire baskets	11	23	32	36	38	51	45	41	48	40	57	44
Steam jets and ex. from pumps ...	30	39	43	48	52	49	47	34	33	44	45	32
Natural	205	316	378	452	528	516	636	523	453	389	336	302
Small mines, mode of ventilation not known	266	167	309	242	179	200	73	107	103	98	88	73
Totals	892	1009	1165	1190	1212	1245	1267	1126	1072	1006	967	954

TABLE SHOWING THE NUMBER OF MINES EMPLOYED
METHODS OF VENTILATION AND THE THREE

COAL.

Counties.	Character of Opening.		
Athens			
Belmont			
Carroll			
Columbiana			
Coahocton			
Gallia			
Guernsey			
Harrison			
Hocking			
Jefferson			
Marion			
Meigs			
Mingo			
Monroe			
Morgan			
Muskingum			
Nichols			
Ohio			
Portland			
Putnam			
Richmond			
Scioto			
Shelby			
Stark			
Summit			
Tuscarawas			
Wade			
Washington			
Wayne			
Wheeling			
Wood			
Wyandott			
Yates			
Zadok			

3,257,624 tons of coal from the use of
1 tons; Perry, 2,275,683; Guernsey, 2,165,528
533 tons; Belmont, 1,520,708 tons; Tuscarawas.
Hocking, 1,146,646 tons.

and four and
powder during
a loss of 480,320
from its use repre-
ed. In mining this
ed used. The number
23 as compared with the
to report for the year was 247.
ing the previous year.
10 serious and one minor accident or a total of 11
the use of powder in the mines. As compared with the
a decided increase is shown when only 5 fatal, 13 serious
accidents were recorded from the use of powder.
At the Edgar No. 1 mine located in Jefferson County, two men,
and foreigners, were killed by an explosion of powder, one
of them using a keg of powder for a seat, when a spark from his lighted
lamp ignited the powder resulting in the death of both. The verdict of
the coroner attending this inquest is so pointed and full of good sound
judgment, that we print it in full. His suggestions might well be acted
upon with good results, although it would seem that a person of five
years' experience in a mine, had not learned the first principle of min-
ing, who would be guilty of an act of carelessness such as this person
was, and that all efforts to educate men, foreigners or otherwise, were
fruitless. The truth underlying the cause of most of the fatalities re-
corded by this Department is contained in the one word, "Carelessness,"
or an indifference to their own safety or the safety of others.

VERDICT.

"After having examined the body of the deceased, Julius Wear, and
having heard the foregoing testimony, I do find that the said deceased
came to his death on the 22nd day of March, A. D. 1903, in the Wheeling
Hospital, from injuries received in a powder explosion on the 16th of said
month, while at work in mine No. 1 of the Glen Run Coal Company in
Warren Township, Jefferson County, Ohio.

"The testimony shows that the deceased, in company with his brother
Anthony, were working in room No. 22 in number two butt entry
id mine, as butties, and that at about quitting time Julius was sitting

room with a 25 pound can of powder placed between his
in filling a cartridge, with his lighted lamp fastened on
drop of burning oil fell from the lamp into the can of
ame, inflicting burns and other injuries to Julius
ath as above stated.

MINES
DURING THE YEARS
OF OPENING

g miners, in "Mine Rules and Regulations"
ining Department, provides that: "When-
x of powder or other explosive, or while
shall first place his lamp not less than
and in such a position that the air current
it, and he shall not smoke while handling
unable to learn whether the men knew this rule
mine boss testified that foreign miners were instructed
ne. At any rate, had this rule been observed the unfortunate
at would have not occurred.

Julius had been in this country about five years, and must surely
ave acquired some knowledge of the dangerous qualities of powder in
l that time and realized the danger of having a lighted lamp so close
a can of powder.

"It would be an excellent plan to prohibit two unskilled men who
ve little or no knowledge of the English language, from working in
room together, but instead, that when a foreigner is employed to work
a mine that he be paired off with one of his countrymen who has
quired some command of the English language, as well as a fair knowl-
dge of mining and handling of explosives. It should also be made a
le to limit the foreign miner, at least, to a quantity of powder per day
be taken into their rooms sufficient only for the day's work, as through
eir carelessness and ignorance of the various dangers of their work,
ot only are their own lives endangered, but that of others as well. As
is is the fourth death resulting in this county recently from the care-
ss handling of explosives in coal mines, the miners should be com-
elled to use greater care in handling the same than so many have
own in the past.

Witness my signature and seal of office this 14th day of April, A.
D., 1903."

GEORGE A. CAMPBELL,

Coroner of Jefferson County.

On April 20th three men were burned from an explosion of powder
t the Huffs Run Mine, Tuscarawas County, from shots being fired
ontrary to rules. Shot firers were suggested as a remedy, or the coal
be mined before shooting.

On October 31st an explosion occurred at the Big Walnut mine,
olumbiana County, and owned by the Peerless Mining Co., Cleveland,

down in the room with a 25 pound can of powder placed between his legs, engaged in filling a cartridge, with his lighted lamp fastened on his hat, and that a drop of burning oil fell from the lamp into the can of powder, exploding same, inflicting burns and other injuries to Julius which resulted in his death as above stated.

Rule No. 7, governing miners, in "Mine Rules and Regulations" issued by the Ohio State Mining Department, provides that: "Whenever a workman shall open a box of powder or other explosive, or while in any manner handling same, he shall first place his lamp not less than five feet from such explosive, and in such a position that the air current cannot convey sparks to it, and he shall not smoke while handling explosives." I was unable to learn whether the men knew this rule or not, but the mine boss testified that foreign miners were instructed as to the same. At any rate, had this rule been observed the unfortunate accident would have not occurred.

Julius had been in this country about five years, and must surely have acquired some knowledge of the dangerous qualities of powder in all that time and realized the danger of having a lighted lamp so close to a can of powder.

"It would be an excellent plan to prohibit two unskilled men who have little or no knowledge of the English language, from working in a room together, but instead, that when a foreigner is employed to work in a mine that he be paired off with one of his countrymen who has acquired some command of the English language, as well as a fair knowledge of mining and handling of explosives. It should also be made a rule to limit the foreign miner, at least, to a quantity of powder per day to be taken into their rooms sufficient only for the day's work, as through their carelessness and ignorance of the various dangers of their work, not only are their own lives endangered, but that of others as well. As this is the fourth death resulting in this county recently from the careless handling of explosives in coal mines, the miners should be compelled to use greater care in handling the same than so many have shown in the past.

Witness my signature and seal of office this 14th day of April, A. D., 1903."

GEORGE A. CAMPBELL,

Coroner of Jefferson County.

On April 20th three men were burned from an explosion of powder at the Huffs Run Mine, Tuscarawas County, from shots being fired contrary to rules. Shot firers were suggested as a remedy, or the coal to be mined before shooting.

On October 31st an explosion occurred at the Big Walnut mine, Columbiana County, and owned by the Peerless Mining Co., Cleveland,

Ohio. The inspector investigating the accident found that it was caused from an explosion of smoke due to the shots being fired at the same time. Several of the men were blown quite a distance and seriously injured. Fortunately no fatalities resulted from the explosion, but to avoid future repetitions of the same nature, shot firers were employed which has proven very satisfactory.

On January 7th Michael Carey was found dead in the Cherry Valley mine, Columbiana County, owned by the Cherry Valley Iron Works, Lectonia, Ohio, death being caused from suffocation from powder smoke. He returned to fire his shot after the other miners had ignited theirs, rendering the mine very smoky, and his death was supposed to have been caused from these conditions. A regular firing time is the practice at this mine and every miner is supposed to fire his shot in turn and leave the mine, and any person returning does so at a risk, and was in violation of the orders of the mine foreman.

TABLE SHOWING THE AMOUNT OF POWDER CONSUMED IN THE MINES
OF THE STATE AND THE NUMBER OF TONS OF COAL PRODUCED TO
THE KEG.

Counties.	Number firms which reported	Number firms which did not report.	Tons mined by firms which reported.	Number kegs of pow- der reported as used.	Number tons mined to keg of powder used.
Athens	22	5	3,257,624	23,995	136
Belmont	32	22	1,520,708	8,380	181
Carroll	13	4	305,619	3,602	85
Columbiana	26	16	718,302	13,231	54
Coshocton	10	7	304,813	6,011	51
Gallia	3	1	23,729	210	113
Guernsey	18	10	2,165,528	17,058	121
Harrison	13	17	243,308	1,927	127
Holmes	9	3	28,099	685	41
Hocking	5	5	1,146,646	6,418	178
Jackson	44	3	2,363,211	14,253	165
Jefferson	21	18	1,995,733	13,538	148
Lawrence	15	5	205,036	5,068	40
Mahoning	6	16	60,301	2,375	25
Medina	8	.....	136,803	5,344	26
Meigs	22	5	337,999	5,821	58
Morgan	2	.....	82,315	419	196
Monroe .....	.....	2	.....	.....	.....
Muskingum	27	36	236,342	7,735	31
Noble	18	14	43,213	356	121
Perry	44	20	2,275,683	22,536	101
Portage	2	.....	101,889	6,125	16
Scioto	3	.....	8,515	347	24
Stark	33	21	854,619	29,169	29
Summit	9	.....	44,329	2,035	22
Trumbull	3	2	7,781	297	26
Tuscarawas	44	12	1,247,789	18,757	66
Vinton	10	3	151,555	3,767	40
Washington	1	.....	4,000	93	43
Wayne	7	.....	97,952	4,156	23
Totals	470	247	19,969,441	223,708	89¼

Description of work

[illegible]

DETAILED MINING SCALE FOR HOCKING VALLEY.

(Sub-District No. 1 of District No. 6.)

Effective from April 1st, 1903, to April 1st, 1904, as revised and amended under and in accord with the Inter-State Agreement adopted at Indianapolis, on February 7, 1903.

PICK MINING—Rate of screened lump coal, per ton.....	\$0.90
Run of mine, 5-7 lump price.....	.64 2-7
Entries, dry, per yard.....	2.25
Break throughs in entries, per yard.....	2.25
Break-throughs in rooms, per yard.....	1.56
Room turning, per room.....	3.41
Track layers, per day.....	2.56
Track layers' helpers, per day.....	2.36
Trappers, per day.....	1.13
Bottom cagers, drivers, trip (rope) riders, per day.....	2.56
Water haulers, machine haulers, per day.....	2.56
Timber men, per day	2.56
Pipe men, for compressed air plants, per day.....	2.50
Wiremen, per day.....	2.56
Motorman, minimum per day.....	2.56
All other inside day labor, per day	2.36

MACHINE.

CUTTING, by Jeffrey styles of machines in rooms, per ton.....	\$0.10
by Jeffrey styles of machines in entries, per ton.....	.13½
by punching machines in rooms, per ton.....	.14½
by punching machines in entries, per ton.....	.16
LOADING, in rooms, per ton.....	.43
in rooms with hand drilling, per ton.....	.51
in entries, per ton.....	.60
in entries with hand drilling, per ton.....	.63
break throughs in entries.....	Entry Price.
break throughs in rooms, per ton.....	.5615
break throughs in rooms with hand drilling, per ton.....	.5915
DRILLING, by hand, per ton.....	.03
by machine, per ton.....	.02½
ROOM TURNING, cutter and loader.....	Entry Price

OUTSIDE DAY WAGE SCALE.

The following shall be minimum base for the outside day labor named, to which base twelve and one-half (12½) per cent. is to be added for the scale year beginning April 1, 1903:

First blacksmiths, per day.....	\$2.50
Second blacksmiths, per day.....	2.25
Blacksmiths' helpers, per day.....	2.10
Carpenters, per day	2.25
Dumpers and Trimmers, per day.....	2.10
Slack haulers, per day.....	1.75
Greasers and Couplers.....	1.25

All labor above enumerated, now receiving more than the prices above stated per day, shall be paid twelve and one-half (12½) per cent. advance on the wages they now receive.

All outside labor, not enumerated in the above scale, shall receive twelve and one-half (12½) per cent. advance on the wages now being paid.

Engineers and firemen to receive an advance of twelve and one-half (12½) per cent. above present wages, with present conditions.

All present outside day labor not satisfied with the wages to be paid according to this scale, shall be given an average place in the mine.

The failure to arrange a complete uniform outside day wage scale, is on account of the differences in the conditions and the wages paid the several classes of outside day labor in the Hocking District.

NOTE—The 12½ per cent. advance herein provided, added to basing figures, makes the following new scale effective April 1, 1903:

First blacksmiths, per day.....	\$2.81
Second blacksmiths, per day.....	2.53
Blacksmiths' helpers, per day	2.36
Carpenters, per day	2.53
Dumpers and Trimmers, per day.....	2.36
Slack haulers, per day.....	1.97
Greasers and Couplers, per day	1.41

F. S. BROOKS, Secretary.

RULES AND CONDITIONS GOVERNING THE HOCKING DISTRICT FROM APRIL 1, 1903, TO APRIL 1, 1904.

SECTION I—TURNS.

There shall be no free turns allowed to either rooms or entries. The entries shall be driven as fast as operators desire or conditions permit, but in no case shall entry miners be allowed more cars per week than room miners, and at least once each two weeks the turn shall be made uniform for the time previously worked. If, however, the regular turn will not allow cars enough to drive the entries as fast as desired, the operators shall increase the number of miners in each entry, so that, by giving to each the regular turn, the entries shall be driven as fast as two miners could do with full work. If, however, the room men decline to take their place in the entries when requested to do so by the operators, then the entry men shall have free turns until the entries are driven the required length; nothing in the foregoing to prevent fast turns.

SECTION II—LIMIT ON MINE CARS.

No limit of weight shall be placed on loading mine cars, and in case of loss in transit the company shall not be held responsible, except where cars are broken by employes or where a wreck occurs, the average weight shall be made good by the company. In order that miners cannot take advantage of this clause, the mine manager and committee of any mine where complaint is made of loading cars over their capacity shall mutually agree on a standard height of loading cars.

SECTION III—CHECK OFF.

The system of checking off for the United Mine Workers' organization remains in force and must be observed, same to be checked off by per cent. of earnings. The above to include all dues and assessments for burial fund and United Mine Workers' organization.

In order to be honored, check off figures must be furnished to the Company by noon of the first, and by noon of the sixteenth, of each month.

SECTION IV—CLAY VEINS.

Where clay veins, roll in bottom, or horse-backs exist, the price for removing same shall be determined between loader, mine boss, and mine committee.

SECTION V—BOTTOMS, SPRAGS, ETC.

All machines shall be fitted with front shoe not to exceed two and one-half inches in thickness, and the machine men be required to cut coal level and close to bottom; and in no case shall thickness of bottom exceed four inches, except in case of pots or other extreme variations. All machine men leaving more bottom than above must lift the same or it shall be lifted at their expense.

Where the mine boss or superintendent orders left a greater thickness than four inches the company shall take care of it, and where the bottom is sulphurous and unmarketable the miner may call the attention of the mine boss to it and endeavor to arrive at an agreement for its removal or retention. If the mine boss and miner fail to reach an agreement as to compensation or otherwise, the matter shall be submitted to the superintendent and mine committee for adjustment. In case of sprags being left by a machine man, he shall be notified by loader, and if he refuse to remove the same, the loader shall remove same and be allowed fifty cents for so doing; the said fifty cents to be deducted from machine runner. And when any machine runner leaves six or more sprags in any one pay he shall be removed from machine and his services be disposed of as deemed best by the general superintendent.

The company shall provide shields for covering cutter head of machines. The machine man shall be required to remove the bits from the chain on cutter head, or place shield over cutter head, to make the machine safe to be moved.

Any machine man failing to carry out this rule may be removed from machine without question.

SECTION VI—ROOMS.

All rooms shall be thirty feet wide with two tracks in each room where practicable. Where rooms have to be cut twenty-four feet wide or under to eighteen feet, same shall be paid for at three cents per ton extra. Not to affect pillars or entries. Each two men shall be given two rooms where practicable. Slabs to be left to men and mine boss.

SECTION VII—BLACKSMITHING.

Machine loaders are not to be charged for blacksmithing.

SECTION VIII—PICK MINE NECKS.

In opening rooms in pick mines where narrow work exceeds eighteen feet before widening room, all in excess of eighteen feet shall be paid for at entry price.

SECTION IX—WET PLACES.

Where the mine boss and miner fail to agree as to whether the working place is wet and entitled to extra pay, it shall be referred to the committee and mine boss or superintendent, and if adjudged wet, three cents per ton additional shall be paid.

Ten cents per barrel shall be paid for bailing water; sufficient barrels to be furnished to miners to keep their places dry; the said barrels to be common oil barrels.

In the event of management failing to provide empty barrels as required by miners, then three and one-quarter (3 1-4) cents per ton extra shall be paid for wet places.

It shall be optional with the Company to work wet places.

SECTION X—MINE IDLE ON ACCOUNT OF IDLE MEN.

If four men are out of cutting or drilling at work time in the morning, and upon investigation by mine boss and committee it is found to be the fault of the company, the mine shall be laid idle the next day at the discretion of the committee. But this shall not prevent the company's furnishing employment to the men so idle, in preference to the mine being rendered idle.

SECTION XI—SLATE.

The company shall remove the slate from the working places of the miner; and if the company fails after being notified, the miner shall be employed to remove such slate and be paid therefor at the price agreed upon between the mine boss and the miner, based on the price of inside day labor.

SECTION XII—DOUBLE SHIFT ENTRIES.

Thirty cents per yard shall be paid for driving double shift entries and breakthroughs between entries.

SECTION XIII—STOPS.

No stoppage shall take place at any mine on account of any grievance (except, for violation of agreements or refusal of employers to pay or regular pay day without an explanation), until the matter has been presented to the mine boss and superintendent and an opportunity for adjustment permitted; and failing to adjust, then the matter be referred to the officials and operators.

SECTION XIV—CLEAN COAL.

No dock shall be taken for less than 100 pounds of dirt, unless it is apparent that dirty coal has been loaded intentionally; then 300 pounds of good coal shall be taken for 100 pounds or less. For from 150 to 250 pounds of dirty coal, 700 pounds of good coal shall be taken. For 250 or more pounds of dirty coal, 1,000 pounds of good coal shall be taken.

For the third car of dirty coal in the same day from the same working place, 1,500 pounds of good coal shall be taken, and if the man or men are found to have an average place by bank boss and committee, he or they shall be laid off for one day or more at the discretion of the mine boss and committee.

The proceeds of all good coal docked to be placed in the burial fund. Weigh offices to be so arranged that checkweighman can see chutes and railroad car.

SECTION XV—LOST COAL.

If the company insist upon the machine men cutting places, then the company shall pay for all coal lost by places falling in.

SECTION XVI—BREAKTHROUGHS BETWEEN ROOMS.

All breakthroughs between rooms shall be paid for at entry price for all coal over three cuts by a six-foot machine.

SECTION XVII—MEMBERS' SONS.

All things being equal, sons of members of the United Mine Workers of America, when becoming of proper age, shall be allowed the preference of going into the mine.

SECTION XVIII—CLEARING TRACK.

Men, other than drivers and trappers, employed to gather up coal along working roads and cleaning up tracks, shall receive pay for such work at narrow work prices per ton, with cutting added.

Any such men found taking down or loading other than the coal already down and along tracks shall be discharged.

SECTION XIX—ROCK IN ENTRY.

The taking down of rock in entry is referred to the district officers and the several companies.

SECTION XX—ENTRY WORK BY DAY.

Where the company wishes to drive deficient entry by the day, the price per day shall be equal to four (4) tons of pick coal; the company to have the right to select their men. The men who are to receive this price are the men who do the drilling and shooting.

IN WITNESS OF AGREEMENT on all of the foregoing rates of wages, rules, and regulations, signed at Athens, Ohio, this third day of March, 1903.

In behalf of operators:

J. M. ROAN.
D. C. THOMAS.
C. G. NEWTON.
THOS. J. LEYSHON.
G. C. WEITZELL.
A. CUNNINGHAME, Chairman.

In behalf of miners:

W. H. HASKINS, President.
JAMES PRITCHARD.
OWEN F. MURRAY.
JOHN N. BREWER.
MACK NORTH.
MICHAEL COLLINS, Dist. Pres't.

F. S. BROOKS,
JOSEPH RICHARDS,
SECRETARIES.

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>Chief Inspectors.</i>						
Andrew Roy, D.	Trumbull	Wm. Allen, D.	April 6, 1874	April 6, 1878	4 years	Resigned.
Jas. D. Poston, D.	Hocking	R. M. Bishop, D.	April 6, 1878	Nov. 15, 1879	1 yr. 7 mos.	Not confirm. by Senate.
David Owens, D.	Trumbull	R. M. Bishop, D.	Nov. 16, 1879	Feb. 12, 1880	3 months .	
Andrew Roy, R.	Jackson	Chas. Foster, R.	Feb. 12, 1880	Feb. 16, 1884	4 years	Resigned.
Thos. B. Bancroft, D.	Gallia	Geo. Hoadley, D.	Feb. 16, 1884	April 1, 1888	4 yrs. 1½ mo.	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Joseph B. Foraker, R.	Apr. 1, 1888	April 30, 1888	1 month ...	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Joseph B. Foraker, R.	May 1, 1888	April 30, 1892	4 years	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Wm. McKinley, Jr., R.	May 1, 1892	April 30, 1896	4 years	Reappointed.
Robt. M. Haseltine, R.	Mahoning	Asa S. Bushnell, R.	May 1, 1896	April 30, 1900	4 years	Incumbent.
Elmer G. Biddison, R.	Athens	Geo. K. Nash, R.	May 1, 1900	April 30, 1904	.....
<i>District Inspectors.</i>						
Jacob J. Klein, R.	Stark	Chas. Foster, R.	June 4, 1881	Jan. 26, 1883	2 yrs. 7½ mo	Resigned.
John P. Williams, R.	Trumbull	Chas. Foster, R.	Jan. 26, 1883	Feb. 16, 1884	1 yr. 21 dys.	
Austin P. King, Jr. D.	Columbiana ..	Geo. Hoadley, D.	Feb. 16, 1884	April 30, 1886	2 yr. 2½ mo.	Resigned.
Wm. Dalrymple, D.	Athens	Geo. Hoadley, D.	May 1, 1884	Mch. 1, 1888	3 yrs. 10 mo.	Resigned, held over as no appointment was made at expiration of term, May 1, 1887.
Wm. A. Davis, D.	Guernsey	Geo. Hoadley, D.	May 1, 1884	Feb. 15, 1886	1 yr. 9½ mo.	Resigned.
Joseph L. Morris, R.	Coshocton	Joseph B. Foraker, R.	Feb. 15, 1886	June 1, 1889	3 yrs. 2½ mo	Resigned.
D. J. Harry, R.	Jackson	Joseph B. Foraker, R.	April 1, 1888	April 30, 1888	1 month	Reappointed.
D. J. Harry, R.	Jackson	Joseph B. Foraker, R.	May 1, 1888	April 30, 1891	3 years	
David E. Evans, R.	Meigs	Joseph B. Foraker, R.	May 1, 1888	April 30, 1891	3 years	
Jas. W. Haughee, R.	Athens	Joseph B. Foraker, R.	May 1, 1888	April 30, 1891	3 years	
Robert Bell, R.	Stark	Joseph B. Foraker, R.	May 8, 1886	April 30, 1887	11 mos. 23 d.	Reappointed.
Robert Bell, R.	Stark	Joseph B. Foraker, R.	May 1, 1887	April 30, 1888	1 year	Reappointed.

APPOINTMENTS SINCE THE CREATION OF THE DEPARTMENT.—Concluded.

Name of Inspector.	County.	Governor by whom appointed.	Term began.	Term expired.	Time served.	Remarks.
<i>District Inspectors—</i> <i>Concluded.</i>						
Robert Bell, R.....	Stark	Joseph B. Foraker, R.	May 1, 1888	Aug. 11, 1890	2 y. 3 m. 11 d	Resigned.
Ebenezer Lewis, D..	Summit	Jas. E. Campbell, D...	Aug. 11, 1890	April 30, 1891	8 mos. 20 d..	Reappointed.
Ebenezer Lewis, D..	Summit	Jas. E. Campbell, D...	May 1, 1891	April 30, 1894	3 years	Reappointed.
Thos. H. Love, R....	Carroll	Joseph B. Foraker, R.	June 1, 1889	Aug. 1, 1891	2 yrs. 2 mos..	Reappointed.
Thos. H. Love, R....	Carroll	Wm. McKinley, Jr., R.	July 15, 1892	April 30, 1894	1 y. 9 m. 15 d	Reappointed.
Thos. H. Love, R....	Carroll	Wm. McKinley, Jr., R.	May 1, 1894	Feb. 15, 1898	3 yrs. 9½ m..	Resigned.
Wm. B. Rennie, D....	Tuscarawas ..	Jas. E. Campbell, D...	Aug. 1, 1891	July 15, 1892	11 mo., 15. d.	Resigned.
Jno. E. Short, D.....	Hocking	Jas. E. Campbell, D...	May 1, 1891	May 7, 1894	3 yrs., 7 dya.	Resigned.
Adam P. McDonald, D.	Perry	Jas. E. Campbell, D...	May 1, 1891	July 15, 1892	1 yr., 2½ mo	To take effect July 15,
Wm. H. Turner, D....	Guernsey	Jas. E. Campbell, D...	May 1, 1891	April 30, 1894	3 years	before entering on
Jas. W. Haughee, R.	Athens	Wm. McKinley, R.....	June 17, 1892	June 28, 1892	Apptd, resg.	his duties.
Robt. H. Miller, R..	Perry	Wm. McKinley, R.....	July 15, 1892	April 30, 1894	1 yr. 9½ mos	Reappointed.
Robt. H. Miller, R..	Perry	Wm. McKinley, R.....	May 1, 1894	July 15, 1898	4 yrs. 2½ mo.	Reappointed.
Alexander Beattie, R.	Athens	Wm. McKinley, R.....	July 15, 1892	July 15, 1895	3 years	Reappointed.
Alexander Beattie, R.	Athens	Wm. McKinley, R.....	July 15, 1895	July 15, 1898	3 years	Reappointed.
Jno. P. Jones, R....	Stark	Wm. McKinley, R.....	July 15, 1892	July 15, 1895	3 years	Resigned.
Jno. P. Jones, R....	Stark	Wm. McKinley, R.....	July 15, 1895	Dec. 31, 1897	2 yrs. 5½ mo	Reappointed.
Saml. Llewellyn, R..	Jackson	Wm. McKinley, R.....	May 9, 1894	May 21, 1897	3 yrs. 12 da..	Reappointed.
Saml. Llewellyn, R..	Jackson	Asa S. Bushnell, R...	May 21, 1897	May 19, 1900	2 y. 11 m. 28 d	Reappointed.
Thos. McGough	Belmont	Wm. McKinley, R.....	May 1, 1894	April 30, 1897	3 years	Reappointed.
Thos. McGough	Belmont	Asa S. Bushnell, R...	May 1, 1897	June 1, 1900	3 yrs. 1 mo...	Reappointed.
Thos. McGough	Belmont	Geo. K. Nash, R.....	June 1, 1900	April 30, 1903	2 yrs. 11 mo.	Incumbent.
Rees T. Davis.....	Columbiana ..	Geo. K. Nash, R.....	May 1, 1903	April 30, 1906	3 years	Reappointed.
Rees T. Davis.....	Columbiana ..	Wm. McKinley, R.....	May 1, 1894	April 30, 1897	3 years	Reappointed.
Wm. K. Moore.....	Stark	Asa S. Bushnell, R...	May 1, 1897	May 31, 1900	3 yrs. 1 mo.	Reappointed.
		Asa S. Bushnell, R...	Jan. 17, 1898	July 15, 1898	6 months ...	Reappointed.

Wm. K. Moore.....	Stark	Asa S. Bushnell, R....	July 15, 1898	July 1, 1900	1 y. 11 m. 15d	Resigned.
Jas. P. Davis.....	Carroll	Asa S. Bushnell, R....	Feb. 15, 1898	Jan. 1, 1901	2 y. 10 m. 15d	Reappointed.
Jas. P. Davis.....	Carroll	Geo. K. Nash, R.....	Jan. 1, 1901	April 30, 1903	2 yrs. 4 mos	Reappointed.
Jas. P. Davis.....	Carroll	Geo. K. Nash, R.....	May 1, 1903	April 30, 1906	.....	Incumbent.
L. W. Hull.....	Athens	Asa S. Bushnell, R....	July 15, 1898	July 15, 1899	1 year	Resigned.
David H. Williams..	Athens	Asa S. Bushnell, R....	July 15, 1899	July 15, 1901	2 years	Reappointed.
David H. Williams..	Athens	Geo. K. Nash, R.....	July 15, 1901	July 15, 1904	.....	Incumbent.
David B. Wilson....	Perry	Asa S. Bushnell, R....	July 15, 1898	May 30, 1900	1 y. 10 m. 15d	Reappointed.
David B. Wilson....	Perry	Geo. K. Nash, R.....	June 1, 1900	June 9, 1903	3 yrs. 9 days	Resigned.
R. M. Mason.....	Hocking	Geo. K. Nash, R.....	May 19, 1900	April 30, 1903	2 y. 11 m. 11d	Reappointed.
R. M. Mason.....	Hocking	Geo. K. Nash, R.....	May 1, 1903	Aug. 15, 1903	3 mos. 15 da.	Resigned.
W. H. Turner.....	Guernsey	Geo. K. Nash, R.....	June 1, 1900	April 30, 1903	2 yrs. 11 mo	Reappointed.
W. H. Turner.....	Guernsey	Geo. K. Nash, R.....	May 1, 1903	April 30, 1906	.....	Incumbent.
W. H. Miller.....	Stark	Geo. K. Nash, R.....	July 1, 1900	July 15, 1901	1 yr. 15 da.	Reappointed.
W. H. Miller.....	Stark	Geo. K. Nash, R.....	July 15, 1901	July 15, 1904	.....	Incumbent.
Jno. Winefordner ..	Muskingum	Geo. K. Nash, R.....	June 9, 1903	April 30, 1906	.....	Incumbent.
Ed. S. Smith.....	Hocking	Geo. K. Nash, R.....	Aug. 15, 1903	April 30, 1906	.....	Incumbent.

MINE MAPS.

Maps of mines showing the underground workings and the amount of excavation to the number of 293 were filed during the year 1903. This was 26 more than was filed during the year 1902, when 267 were filed with the Mining Department.

Section 296 of the Revised Statutes regulating the mapping and surveying of mines was a very judicious one, and one absolutely essential to the opening up of new mining properties which are located in close proximity to old worked out and abandoned coal fields, as by consulting the amount of excavation and worked out territory on maps filed of these properties it can be seen to what extent they have been mined, also their location, etc. Many requests have been made to the department by letter and by persons to examine maps on file here, although no maps are permitted out of the office. While the Department has experienced some difficulty in securing maps of coal mines having an excavation of over 15,000 cu. yds. as required by law, we are of the belief that it has been due to the inability of operators to secure competent mining engineers, rather than to any disposition on their part to evade the law. A skilled mining engineer is never in want of surveying work, and it is often exceedingly difficult to secure the services of such, and they are always in demand. This often leads to maps being delayed that are due this office. Many of the large coal companies employ their own mining engineers and a number of the maps on file show skilled workmanship and a knowledge of mining engineering on the part of the engineer doing the work. It is a satisfaction and a pleasure to inspect a map that is made in compliance with the law, and prepared by a person who has his work well in hand, while on the other hand, to pass on a map showing poor workmanship and omitting many of the essential features requisite to make a map one of value needs only to be compared to be appreciated.

The total number of maps on file in this Department since the law was passed requiring maps of mines to be made and filed amount in all to 1,727. A detailed list of maps filed by counties in 1903 will be found following this article; also a table showing the number filed prior to 1884, and for each succeeding year since that time.

Perry County filed the greatest number of maps in 1903, 36 in all; Jackson, 35; Athens, 29; Belmont, 27; Stark, 30, and Jefferson, 24.

LED LIST OF MAPS OF MINES FILED DURING THE YEAR 1903, BY
COUNTIES.

Athens County.		
.....	No. 3 or Half Moon.....	No. 203.....
.....	No. 10 X.....	Nelsonville Clay.....
.....	No. 24.....	Big Run.....
.....	Broadwell.....	No. 275.....
.....	Sedalia.....	New Pittsburg No. 5.....
.....	No. 311.....	Doanville.....
.....	Luhrig No. 1.....	Luhrig No. 2.....
.....	No. 55.....	McLeish 31.....
.....	Halbert.....	Imperial No. 1.....
.....		No. 201.....
Belmont County.		
1.....	Wheeling Creek No. 1.....	Crescent No. 2.....
standard.....	Laughlin.....	Tin Plate.....
Hills No. 2.....	Captina.....	Crescent No. 3.....
.....	Empire No. 6.....	Buckeye.....
No. 1.....	Gaylord.....	Pipe Creek.....
No. 2.....	O. & W. Va.....	Pultney.....
Hill.....	Glen.....	Maple Hill No. 2.....
.....	Franklin.....	Delora No. 1.....
diamond.....	Kennon No. 2.....	Barton.....
Carroll County.		
.....	Beatty No. 2.....	Somers No. 3.....
.....	Somers No. 2.....	
No. 6.....	Heatherington No. 2.....	
Columbiana County.		
.....	Cherry Valley No. 3.....	Dewey No. 2.....
hill.....	Cement.....	Lisbon.....
aft.....	Folts.....	Leetonia.....
Valley No. 6.....	Fairfield No. 2.....	McNabb.....
Valley No. 7.....	State Line.....	New Salisbury.....
Hill.....	Card & Prosser No. 4.....	Farquhar.....
Coshocton County.		
am No. 2.....	Morgan Run No. 3.....	Best.....
am No. 3.....	Wade No. 2.....	Hay No. 2.....
1 No. 1.....	Arnold.....	
Guernsey County.		
.....	Forsythe.....	Little Kate.....
.....	Robins.....	Black Top.....
nding.....	Nicholson.....	India amp.....
m.....	Imperial.....	Ideal.....
l.....	Old Orchard.....	Pioneer No. 2.....
y.....		Murray Hill.....
Harrison County.		
leaf.....	Tippecanoe No. 1.....	Roby No. 1.....
Holmes County.		
nd.....		

DETAILED LIST OF MAPS OF MINES—Continued.

Hocking County.		
Sand Run No. 1.....	Brush Fork No. 2.....	No. 207.....
No. 15.....	Brush Fork No. 3.....	Black Diamond.....
Jackson County.		
Superior No. 1.....	Jones & Morgan No. 3.....	Crescent.....
Superior No. 2.....	Machine.....	Armstrong.....
Superior No. 3.....	Milton No. 2.....	Superior No. 8.....
Superior No. 4.....	Wainwright.....	Superior No. 9.....
Superior No. 5.....	Alma.....	Superior No. 10.....
Superior No. 6.....	Eclipse.....	Jones Slope No. 3.....
Chapman.....	Comet No. 1.....	Tibbals.....
Grace.....	Superior No. 7.....	
Springfield.....	Price.....	
Fluhart No. 1.....	Globe No. 3.....	
Fluhart No. 2.....	Star No. 4.....	
Fluhart No. 3.....	Milton No. 3.....	
Wellston No. 3.....	Enterprise.....	
Acorn Slope.....	Milton No. 4.....	
Jefferson County.		
Dillon No. 2.....	Great Western Coal.....	West Pittsburg.....
Long Run No. 1.....	LaBelle.....	Zerbe.....
High Shaft.....	Conner No. 1.....	Jefferson No. 1.....
Forest City.....	Conner No. 2.....	Jefferson No. 2.....
Hill Top.....	Markle Coal.....	Empire Clay.....
Calumet Clay.....	Markle Clay.....	Ohio Valley Coal.....
Great Western Clay.....	Glen Run No. 1.....	U. S.....
Portland.....	Glen Run No. 2.....	Jumbo.....
Lawrence County.		
Newcastle.....	Kelley.....	Lawrence Mill.....
Hall.....		
Mahoning County.		
Greenamyra Shaft.....		McKinley.....
Medina County.		
Klondike.....	Easter.....	Whalen No. 2.....
Meigs County.		
Coal Ridge.....	Rockville.....	Buckeye Salt.....
Rolling Mill No. 2.....	Pittsburg.....	
Morgan County.		
Rose.....		Tropic.....
Muskingum County.		
Princess.....	Granger.....	Diamond No. 3.....
Noble County.		
Laura.....		

DETAILED LIST OF MAPS OF MINES—Concluded.

Perry County.		
Rock Run.....	No. 51.....	No. 302.....
No. 5.....	No. 67.....	Lyonsdale New.....
No. 8.....	No. 77.....	No. 69.....
No. 21.....	No. 9.....	Chestnut Ridge No. 2.....
Upton No. 1.....	No. 39.....	Iron Point No. 3.....
Beech Grove No. 6.....	No. 47.....	Keystone No. 3.....
No. 301.....	No. 49.....	Keystone No. 2.....
Hemlock No. 20.....	Keystone No. 1.....	No. 4.....
No. 37.....	No. 79.....	No. 321.....
No. 75.....	Spring Valley.....	San Toy.....
No. 322.....	No. 13.....	New Crescent No. 3.....
No. 11.....	No. 35.....	W. P. Rend's No. 1.....
Portage County.		
Hutson No. 4.....	Hutson No. 6.....	Mullen Shaft.....
Stark County.		
Warwick No. 4.....	Central.....	Indian Run.....
Summit Hill.....	Elm Run No. 4.....	Pigeon Run.....
Pleasant Valley.....	No. 2.....	Crescent.....
Wainwright.....	Warwick No. 5.....	C. & O. B.....
Canton Stoneware.....	Tallyho No. 11.....	Fox No. 12.....
Singer No. 1.....	Stark.....	Krause No. 15.....
McGinty.....	Lahmiller & Kitzmiller.....	Oakwood No. 16.....
Elm Run No. 3.....	North Massillon No. 9.....	Pocock No. 3.....
New Greenville No. 3.....	White Oak.....	No. 13.....
H. B. Camp.....		Brookfield.....
No. 17.....		
Summit County.		
Turkey Foot.....		
Trumbull County.		
Keel Ridge.....		
Tuscarawas County.		
Somerdale No. 2.....	Tunnel No. 3.....	Thompson Run East.....
Midvale No. 2.....	Erhard.....	Thompson Run West.....
Wainwright No. 5.....	Shanesville.....	Royal Coal No. 2.....
Goshen No. 2.....	East Goshen No. 1.....	Beaver Dam No. 1.....
Huff's Run.....	Dew No. 2.....	Center Valley.....
Houk.....	Indian Hill.....	Goshen Hill.....
Vinton County.		
Star No. 2.....	Raccoon.....	Oreton.....
Inghams.....	Cornelia.....	Elk Fork.....
Wayne County.		
Dalton No. 14.....	Stewart.....	

PRODUCTION OF FIRE CLAY DURING THE YEAR.

The Fire Clay Industry of the State for the year 1903, as shown from statistics collected and compiled by this Department, enjoyed one of prosperity, gains being noticeable not only in the amount produced, over the previous year, but in the amount manufactured, amount purchased and in the number of miners employed in producing it, as well.

The total amount of fire clay produced in the year 1903 amounted to 1,567,603 tons, an increase of 38,774 over the year 1902. While the gain of 1903 over the year 1902 is quite noticeable, the gain of 1902 over 1901, reached the immense figures of 191,648 tons.

Eighteen counties in the State made returns of fire clay produced in 1903, Vinton County failing to make any returns of fire clay produced and Trumbull took its place. Eleven fire clay companies made returns for the year in Tuscarawas and Stark; Summit and Muskingum each 8 and Columbiana and Jefferson each 7.

In all 960 miners were employed in the production of fire clay, a gain of one man as compared with the preceding year. The number engaged in manufacturing the raw material into brick, earthenware, tiling and the many other articles of marketable produce made from this mineral, was 4,434, a gain of 418 over the year 1902.

The amount purchased for manufacturing purposes was 20,280, a gain of 5,402 tons. Gains occur amounting to 212,354 tons, and the losses amounted to 173,580 tons.

Jefferson County leads in the amount of fire clay produced, mining 304,097 tons; Stark, 293,919; Tuscarawas, 179,350; Summit, 146,490 and Columbiana 121,911 tons.

The average time worked was 202 days, a gain of 6 days over the year 1902.

The following table exhibits the amount of fire clay produced, the amount manufactured, the amount purchased and the number of persons engaged in the industry of 1903, as compared with the year 1902. Also a table showing the production of fire clay from 1884 to 1903 inclusive.

TABLE SHOWING FIRE CLAY OUTPUT OF THE STATE DURING THE YEAR 1903 AS COMPARED WITH 1902.

Counties.	1902.				1903.				Employees.				Output.			
	No. days worked.	No. men employed.	No. hands engaged in the manufacture.	No. tons mined.	No. tons purchased for manufacturing wares.	No. days worked.	No. men employed.	No. hands engaged in the manufacture.	No. tons mined.	No. tons purchased for manufacturing wares.	Gain in miners.	Loss in miners.	Gain in hands employed in manufacture.	Loss in hands employed in manufacture.	Gain in tons mined.	Loss in tons mined.
Athens	245	44	172	111,216	.....	245	44	187	103,132	.....	.....	.....	.....	.....	.....	8,084
Carroll	211	65	238	99,896	.....	194	45	141	69,270	.....	.....	.....	.....	.....	.....	30,626
Columbiana	216	116	284	171,395	.....	188	86	304	121,911	.....	.....	.....	.....	.....	.....	49,484
Guernsey	116	10	22	1,383	.....	230	10	30	3,705	.....	.....	.....	.....	.....	2,322	.....
Hocking	230	53	153	107,834	.....	277	51	337	116,882	.....	.....	.....	.....	.....	9,048	.....
Holmes	170	12	12	5,060	.....	240	4	16	5,000	.....	.....	.....	.....	.....	.....	60
Jackson	306	12	90	11,110	3,600	223	11	103	15,990	.....	.....	.....	.....	.....	4,880	.....
Jefferson	286	119	694	234,468	.....	282	149	772	304,097	.....	30	.....	.....	.....	69,629	.....
Lawrence	.....	.....	.....	8,952	.....	83	24	.....	14,066	.....	24	.....	.....	.....	5,114	.....
Mahoning	92	14	33	8,740	.....	144	11	51	4,440	.....	.....	.....	.....	.....	.....	4,300
Muskingum	86	17	.....	21,550	.....	108	33	70	44,670	.....	16	.....	.....	.....	23,120	.....
Perry	143	29	98	42,406	.....	153	32	165	52,569	.....	3	.....	.....	.....	10,163	.....
Scioto	250	143	393	78,578	9,678	226	85	381	76,632	18,557	.....	58	.....	.....	.....	1,946
Stark	291	133	658	289,250	.....	250	139	808	293,919	.....	56	.....	.....	.....	4,639	.....
Summit	230	51	633	78,561	1,600	237	53	456	146,490	1,350	.....	.....	.....	.....	67,929	.....
Trumbull	.....	.....	.....	.....	.....	156	8	.....	15,480	373	.....	.....	.....	.....	15,480	.....
Tuscarawas	251	140	536	258,420	.....	209	125	613	179,350	.....	.....	.....	.....	.....	.....	79,070
Vinton	10	1	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Totals	.....	959	4,016	1,528,329	14,875	.....	960	4,434	1,567,603	20,280	139	138	704	286	212,354	173,580
Average	196	.....	.....	.....	.....	202	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gain	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	418	.....	38,774	.....

TABLE SHOWING THE FIRE CLAY PRODUCTION OF THE STATE FROM
JANUARY 1, 1884, TO DECEMBER 31, 1903.

Years.	Output. Tons	Gain.	Loss.
1884	168,208	.....	.....
1885	153,756	.....	14,452
1886	266,709	112,953	.....
1887	366,476	99,767	.....
1888	471,794	105,313	.....
1889	574,129	102,335	.....
1890	833,159	259,030	.....
1891	1,087,560	254,401	.....
1892	1,253,110	165,550	.....
1893	1,032,348	.....	220,762
1894	942,913	.....	89,435
1895	844,832	.....	97,081
1896	827,450	.....	17,382
1897	822,727	.....	4,723
1898	1,026,922	204,195	.....
1899	1,173,697	146,775	.....
1900	1,473,088	299,391	.....
1901	1,337,181	.....	135,907
1902	1,528,829	191,648	.....
1903	1,567,603	38,774	.....

TABLE SHOWING THE PRODUCTION OF IRON ORE BY COUNTIES DURING THE YEARS 1902 AND 1903, AND THE LOSS AND GAIN IN EACH COUNTY.

Counties.	1902.	1903.	Gain.	Loss.
Lawrence	9,041	4,761	.....	4,280
Scioto	1,640	8,234	6,594	.....
Total	10,681	13,995	6,594	4,280
Gain .....	.....	.....	2,314	.....

The Iron Industry in the State has become to be of such limited output that it scarcely rewards any effort to collect statistics, only two counties reporting for the year 1903, Lawrence and Scioto. The total amount produced was 12,995 tons, a gain of 2,314 over the year 1902, when four counties reported an output of iron ore.

TABLE SHOWING THE IRON ORE PRODUCTION OF THE STATE FROM 1884 TO 1903, INCLUSIVE.

Years.	Blackband.			Hematite.			Total.
	Output Tons.	Loss.	Gain.	Output Tons.	Loss.	Gain.	
1884 .....	.....	.....	.....	.....	.....	.....	276.286
1885	70,931	.....	.....	188,646	.....	.....	259,577
1886	83,947	.....	13.012	260,537	.....	71,891	344,484
1887	87,965	.....	4.018	289,500	.....	28,963	377,465
1888	82,054	5,911	.....	171,298	118,202	.....	253,352
1889	70,398	11,656	.....	182,011	.....	10,713	252,409
1890	41,848	28,550	.....	127,240	54,771	.....	169,088
1891	15,540	26,308	.....	52,444	74,796	.....	67,984
1892	8,680	6,860	.....	81,042	.....	28,598	89,722
1893	3,837	4,843	.....	64,423	16,619	.....	68,260
1894 .....	.....	3,837	.....	58,043	6,380	.....	58,043
1895 .....	.....	.....	.....	93,051	.....	35,008	93,051
1896 .....	.....	.....	.....	70,765	22,286	.....	70,765
1897 .....	.....	.....	.....	50,267	20,498	.....	50,267
1898 .....	.....	.....	.....	51,659	.....	1,392	51,659
1899 .....	.....	.....	.....	25,359	16,800	.....	25,359
1900 .....	.....	.....	.....	52,266	.....	26,907	52,266
1901 .....	.....	.....	.....	41,325	10,941	.....	41,325
1902 .....	.....	.....	.....	10,681	30,644	.....	10,681
1903 .....	.....	.....	.....	13,995	.....	2,314	13,995
Total.....	465,204	87,965	17,030	1,884,554	371,937	205,786	2,626,038

Gain.....166,151.

LIMESTONE PRODUCTION FOR THE YEAR.

The Limestone Industry for the year 1903 appears to have been on an average, one of medium prosperity, gains appearing in five of the various classifications into which it is divided, and losses in the same number. However, the gains occur in the more important classifications.

In all 37 counties reported the production of limestone for the year, Belmont, Holmes, Pike and Tuscarawas failing to make any report, and Union being added to the list.

A loss of 98 occurs in the number of day hands employed, 3,848 in all being employed during the year. The average time worked was 167 and 14-37 days, a loss of 13 and 23-37 over the previous year.

The amount of 2,000 pounds each that was burned for lime was 548,068 tons, a loss of 104,922 tons as compared with the year 1902. Ottawa burned 138,769 tons; Erie, 108,851 and Marion 101,936.

The amount of limestone burned for fluxing aggregated 1,501,038 tons, a gain of 11,064 over the year 1902. Ottawa used 773,681 tons; Franklin, 263,598; Erie, 199,100 and Marion 101,657.

One hundred and six thousand, eight hundred and sixty-one cubic feet of dimension stone was quarried in 1903, a gain of 13,675 feet quarried in the previous year. Of this amount Miami quarried 45,735 cubic feet; Clark, 17,703; Franklin, 11,600; Preble, 11,521 and Clinton 7,500.

Two hundred and eighty-six thousand, six hundred and eighty-three cubic yards of building stone was quarried, a gain of 13,543. Clark county produced 83,935 cu. yards; Franklin, 33,151; Miami, 28,610 and Marion 16,180.

A loss of 19,960 cu. yards in the amount quarried for piers and protection is shown, 88,114 cu. yards in all being reported produced for the year. Erie produced 65,043 cu. yards; Ottawa, 17,051 and Miami, 3,186.

Under the classification of the limestone industry used for flagging in all 44,330 square feet were used for this purpose showing a loss of 21,574 square feet. Allen County quarried 20,005 feet; Preble, 6,237; Miami, 5,500 and Erie, 4,000.

A gain of 162,311 square feet of paving is shown in the amount quarried in this classification, the total amount reaching 204,648 square feet. Hardin County reported 72,000 feet; Erie, 60,981 and Putnam, 54,000.

A loss of 8,595 lineal feet of curbing is shown, the total amount being 16,726 feet. Miami, produced 9,735; Preble, 1,816; Clark, 1,233 and Hardin, 1,200.

The amount of limestone used for macadam purposes for the year 1903 amounted to 1,721,687 cubic yards, showing the remarkable gain of 335,583 yards over the year 1902. Franklin County leads in the amount produced, reporting 273,229 cubic yards; Hardin, 266,327; Van Wert, 243,409 and Ottawa, 152,266 yards.

<i>Ottawa</i>	295	763	138,769	773,681	.....	474	17,051	.....	.....	.....	.....	152,266
Paulding	71	25	.....	.....	.....	4,283	.....	.....	.....	.....	.....	9,400
Pickaway	160	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Preble	74	68	36,000	.....	.....	2,058	52	.....	.....	.....	233	22,611
Putnam	131	46	.....	.....	.....	11,521	75	6,237	1,350	54,000	1,816	14,333
Ross	262	45	812	131	.....	5,034	80	.....	.....	8,478	597	17,687
Sandusky	235	116	17,086	.....	.....	.....	.....	355	.....	.....	.....	25,300
Seneca	154	133	4,120	.....	.....	4,566	.....	450	.....	.....	.....	128,517
Stark	159	25	44,370	920	.....	6,008	.....	.....	.....	.....	.....	1,200
Scioto	120	37	.....	17,199	.....	.....	.....	.....	.....	.....	.....	.....
Union	20	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Van Wert	151	212	.....	.....	.....	150	.....	.....	.....	.....	.....	243,409
Wood	159	106	23,600	.....	.....	2,970	.....	.....	.....	.....	.....	20,000
Totals	6,193	3,848	548,068	1,501,038	106,861	286,683	88,114	44,330	204,648	16,726	.....	1,721,687

Average number of days worked 167 14-37.

ANNUAL REPORT

TABLE SHOWING THE COMPARATIVE GAIN AND LOSS IN THE VARIOUS CLASSIFICATIONS OF LIMESTONE, PRODUCTION OF 1903 BEING COMPARED WITH THAT OF 1902.

[illegible]

TABLE SHOWING THE COMPARATIVE PRODUCTION OF LIMESTONE IN OHIO FROM 1886 TO 1903, INCLUSIVE.

Years.	Average number days worked.	Number of men employed.	Number tons of 2,000 pounds each burned for lime.	Number tons of 2,000 pounds each burned for fluxing.	Cubic feet of dimensioned stone.	Cubic yards of ordinary building stone.	Cubic yards for piers and protection purposes.	Square feet of flagging.	Square feet of paving.	Lineal feet of curbing.	Cubic yards of ballast and macadam.
1886	149	2,383	517,270	328,080	566,697	295,231	63,050	187,900	154,636	60,650	186,810
1887	182	2,767	619,027	478,674	950,393	385,247	78,932	350,954	289,195	139,174	416,018
1888	165	3,025	602,074	666,481	1,795,038	.....	78,381	580,901	313,855	205,227	445,770
1889	165	2,631	849,442	235,298	898,886	364,685	69,876	413,400	586,361	209,339	354,544
1890	171	2,445	689,827	308,521	333,077	270,367	81,414	673,850	507,313	165,434	432,650
1891	143	3,286	744,946	284,478	634,901	361,637	66,295	417,855	4,948,939	200,756	622,194
1892	132	3,353	631,049	217,981	1,057,157	323,600	48,102	171,567	2,883,208	101,820	764,784
1893	149	2,929	396,690	108,376	748,712	290,614	57,374	226,654	393,883	209,327	757,142
1894	138	2,484	349,631	240,173	1,398,792	181,722	22,839	206,736	312,868	144,042	435,764
1895	127	3,829	1,175,988	429,632	500,648	253,900	48,675	573,634	640,836	152,873	650,217
1896	132	3,186	397,162	623,544	260,289	215,900	29,114	137,579	163,373	71,236	553,329
1897	131	3,398	481,871	320,437	371,741	248,392	97,543	146,331	113,025	55,168	629,044
1898	132	3,149	624,921	571,029	605,172	368,343	47,762	71,606	48,256	52,940	729,896
1899	142	3,165	626,274	791,701	405,112	264,640	87,099	100,133	81,796	57,091	864,849
1900	141	3,680	547,046	882,426	166,276	274,919	120,264	131,837	64,170	40,550	1,268,416
1901	154	4,135	554,523	1,419,087	318,995	304,312	134,784	103,177	48,512	37,828	1,551,378
1902	181	3,946	652,990	1,469,974	93,186	273,140	108,074	65,904	42,337	25,321	1,386,104
1903	167	3,848	548,068	1,501,038	106,861	286,633	88,114	44,330	204,648	16,726	1,721,687
Gain	.....	.....	.....	11,064	13,675	13,543	.....	.....	162,311	.....	335,583
Loss	14	98	104,922	.....	.....	.....	19,960	21,574	.....	8,595	.....

CASUALTIES DURING THE YEAR.

The total number of accidents of all classes reported to this Department during the year 1903 amounted to 574, a slight increase of 42 over the preceding year. Of this number 114 resulted fatally, 324 were of a serious nature, and 136 were of minor consequence.

The number of tons of coal mined to the life lost was 215,555, or one life lost to every 363 persons employed. The death rate from the source of mining coal is becoming, in this State, alarmingly on the increase. It would seem that all precautions and admonitions issued both by the district inspectors in their daily routine of work of visiting the mines, and from rules and circulars issued by the Mining Department were all of no avail, and that while a number of the fatal accidents occurring in the mines are attributable to the number of uneducated and unskilled workmen employed, a large per cent. of them occur to men well up in years, who are thoroughly familiar with all phases of mining, but who become criminally negligent and careless of their own safety, when a little precaution on their part would have rendered their working place safe. Some of the accidents recorded are purely unavoidable, and are caused from the unforeseen circumstances over which we have no control. Unless some stringent means are adopted whereby persons employed in the mines can be compelled to use adequate and reasonable methods of preventing fatalities, the number is bound to increase as conditions which surround mining in this age are such as to necessitate the greatest care and vigilance possible on the part of the persons employed, if they are to escape uninjured.

The total number of fatal accidents for the year was 114, an increase of 33 over the year 1902. These occurred in 17 of the coal producing counties, while accidents of all classes were reported from 26 of the 30 counties in which coal is produced. Jefferson County reported 27, a gain of 18. This county reported more fatal accidents than any other county in the State, and many more than should have occurred if the proper kind of discipline was in practice, and an effort made on the part of the mine bosses to keep a vigilant watch over the men employed in the mines, especially those of foreign birth, a number of which find employment in the mines of this country. In many cases too much is expected from the mine bosses by their employers, their duties being so numerous that they have not the time to visit the working places as often as is necessary.

Jackson County reported 17 fatal accidents, a gain of 10; Belmont, 15, a gain of 9, Guernsey, 11, a gain of 1; Athens, 9, a gain of 2, and Perry 7, a loss of 3. These six counties furnished 75 and 25.57% of the entire number of casualties for the year. Harrison and Hocking each show a loss of 3 in the number of fatal accidents.

Three hundred and twenty-four serious accidents were reported for the year, a gain of 26 over the year 1902, occurring in 21 counties. Guernsey reported 44, a gain of 14; Jefferson 37, a gain of 14; Athens and Belmont each 36, Athens showing a loss of 19 and Belmont a gain of 6; Jackson and Tuscarawas each reported 29, showing a gain of one and nine respectively. Columbiana showed a gain in serious accidents of 8, while Stark showed a loss of 8 and Portage 5.

The accidents recorded and considered as minor for the year amounted to 136, a loss of 17 over the previous year. Athens County reported 17, a loss of 3; Guernsey and Stark 16, each a loss of 7; Belmont 12, a loss of 2; Columbiana 12, a gain of 7 and Jackson 12, a loss of one as compared with the year 1902.

TABLE SHOWING THE NUMBER OF FATAL, SERIOUS AND MINOR ACCIDENTS AND THE NUMBER OF EACH CLASSIFICATION THAT OCCURRED IN EACH COUNTY.

Counties.	Fatal.	Serious.	Minor.	Total.
Athens	9	36	17	62
Belmont	15	36	12	63
Carroll	1	3	1	5
Columbiana	6	17	12	35
Coshocton	1	3	.....	4
Gallia	1	.....	.....	1
Guernsey	11	44	16	71
Harrison .....	.....	6	7	13
Holmes .....	.....	.....	.....	.....
Hocking	5	20	10	35
Jackson	17	29	12	58
Jefferson	27	37	11	75
Lawrence .....	.....	3	4	7
Mahoning .....	.....	1	1	2
Medina .....	.....	.....	.....	.....
Meigs	1	4	.....	5
Morgan .....	.....	.....	1	1
Monroe .....	.....	.....	.....	.....
Muskingum	1	4	1	6
Noble .....	.....	.....	1	1
Perry	7	28	6	41
Portage .....	.....	.....	8	8
Scioto .....	.....	1	.....	1
Stark	5	18	16	39
Summit .....	.....	1	.....	1
Trumbull .....	.....	1	.....	1
Tuscarawas	4	29	.....	33
Vinton	2	3	.....	5
Washington .....	.....	.....	.....	.....
Wayne	1	.....	.....	1
Total	114	324	136	574

TABLE SHOWING A COMPARISON OF THE CASUALTIES OF 1903 AS COMPARED WITH 1902.

Counties.	1902.				1903.				Gain.	Loss.
	Fatal.	Serious.	Minor.	Total.	Fatal.	Serious.	Minor.	Total.		
Athens	7	55	20	82	9	36	17	62	.....	20
Belmont	6	30	14	50	15	36	12	63	13	.....
Carroll	2	2	.....	4	1	3	1	5	1	.....
Columbiana	5	9	5	19	6	17	12	35	16	.....
Coshocton .....	.....	6	1	7	1	3	.....	4	.....	3
Gallia .....	.....	.....	.....	.....	1	.....	.....	1	1	.....
Guernsey	10	30	23	63	11	44	16	71	8	.....
Harrison	3	3	.....	6	.....	6	7	13	7	.....
Holmes .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hocking	8	18	9	35	5	20	10	35	.....	.....
Jackson	7	28	13	48	17	29	12	58	10	.....
Jefferson	9	23	15	47	27	37	11	75	28	.....
Lawrence	2	1	3	6	.....	3	4	7	1	.....
Mahoning	1	2	2	5	.....	1	1	2	.....	3
Medina .....	.....	.....	1	1	.....	.....	.....	.....	.....	1
Meigs .....	.....	5	2	7	1	4	.....	5	.....	2
Morgan .....	.....	1	.....	1	.....	.....	1	1	.....	.....
Muskingum	1	2	1	4	1	4	1	6	2	.....
Noble	1	.....	.....	1	.....	.....	.....	1	.....	.....
Perry	10	26	10	46	7	28	6	41	.....	5
Portage .....	.....	5	5	10	.....	.....	8	8	.....	.....
Scioto .....	.....	.....	.....	.....	1	.....	.....	1	1	.....
Stark	6	26	23	55	5	18	16	39	.....	16
Summit	1	4	2	7	.....	1	.....	1	.....	6
Trumbull .....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Tuscarawas .....	.....	20	3	23	4	29	.....	33	10	.....
Vinton	1	1	1	3	2	3	.....	5	2	.....
Washington .....	.....	1	.....	1	.....	.....	.....	.....	.....	1
Wayne	1	.....	.....	1	1	.....	.....	1	.....	.....
Total	81	298	153	532	114	324	136	574	101	59

TABLE SHOWING THE COMPARISON OF THE ACCIDENTS OCCURRING DURING 1902 AND 1903.

Counties.	Fatal.		Serious.		Minor.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
Athens	2	.....	.....	19	.....	3
Belmont	9	.....	6	.....	.....	2
Carroll .....	.....	1	1	.....	1	.....
Columbiana	1	.....	8	.....	7	.....
Coshocton	1	.....	.....	3	.....	1
Gallia	1	.....	.....	.....	.....	.....
Guernsey	1	.....	14	.....	.....	7
Harrison .....	.....	3	3	.....	7	.....
Holmes .....	.....	.....	.....	.....	.....	.....
Hocking .....	.....	3	2	.....	1	.....
Jackson	10	.....	1	.....	.....	1
Jefferson	18	.....	14	.....	.....	4
Lawrence	1	2	2	.....	1	.....
Mahoning .....	.....	1	.....	1	.....	1
Medina .....	.....	.....	.....	.....	.....	1
Meigs	1	.....	.....	1	.....	2
Morgan .....	.....	.....	.....	1	1	.....
Monroe .....	.....	.....	.....	.....	.....	.....
Muskingum .....	.....	.....	2	.....	.....	.....
Noble .....	.....	1	.....	.....	1	.....
Perry .....	.....	3	2	.....	.....	4
Portage .....	.....	.....	.....	5	3	.....
Scioto .....	.....	.....	1	.....	.....	.....
Stark .....	.....	1	.....	8	.....	7
Summit .....	.....	1	.....	3	.....	2
Trumbull	4	.....	1	.....	.....	.....
Tuscarawas .....	.....	.....	9	.....	.....	3
Vinton	1	.....	2	.....	.....	1
Washington .....	.....	.....	.....	1	.....	.....
Wayne .....	.....	.....	.....	.....	.....	.....
Total	49	16	68	42	22	39
Gain	33	.....	26	.....	.....	.....
Loss .....	.....	.....	.....	.....	.....	17

SOURCES TO WHICH ACCIDENTS ARE ATTRIBUTABLE.

Falls of roof are accountable for 70 fatal accidents during the year. More fatal accidents are due to this cause than any other source in the mining of coal. However, if proper precautions were taken in the setting of necessary props, especially where the roof is known to be of a dangerous and treacherous nature, the Mining Department would be relieved of the very unpleasant and reluctant duty of recording so many fatal accidents. An increase of 21 from this source is shown as compared with the year 1902. The total number of accidents due to falls of roof for the year was 231, a gain of 8 as compared with the preceding year. Falls of roof are accountable for 40.3 per cent. of the entire number of accidents recorded for the year.

Nine fatal accidents were caused from falls of coal, 4 more than for the year 1902; 31 were of a serious nature and 16 minor, or 9.8 per cent. of the total number of accidents. Nine fatal accidents were also due to injuries received from mine cars, 92 serious and 50 minor, or 26.3 per cent. of the total number of accidents.

Premature explosions and the careless handling of explosives were responsible for 11 fatal, 16 serious and 1 minor, a gain of 6 in the total number, or 4.9 per cent. of the entire number.

Two fatal accidents resulted from the installation of electric wires in the mines during the year. One was reported from the Luhrig No. 2 mine, Athens County, Ohio. George Francis was employed as a lineman at this mine, and met his death by coming in contact with an electric wire. He had been working in the water up to his shoulders, and was advised to return home and replace his wet clothing with dry ones. While he was returning home, and after passing through the seventh east trap door on the north side of the mine he evidently struck the electric trolley wire and from the damp condition of his clothing made the contact so great as to result fatally. No one was present at the time the accident occurred, and the real cause will never be known, although the presumption was that he was killed by coming in contact with the electric wire.

One fatal, 12 serious and 2 minor accidents were caused by mining machines. Fifty-one accidents classified as miscellaneous, of which 5 were fatal, 25 serious and 21 of a minor character.

On June 23d, while sinking a mine shaft for the Cambridge-Somers Coal Co., Cleveland, Ohio, in Guernsey County, 25 men had entered the

blacksmith shop during a thunder storm; the lightning struck the powder magazine exploding it and wrecking the blacksmith shop and killing six men. The blacksmith shop was located about 180 feet from the powder magazine, and it was claimed that 1,350 pounds of dynamite was in stock, and also a supply of caps. No damage was done to the shaft or rigging. While this was virtually not a mine accident, the coal not yet having been reached, it was with a view of avoiding future calamities of this kind that the visit was made, as a law should be enacted limiting the distance and the amount of explosives stored in powder magazines.

TABLE SHOWING THE NUMBER AND CHARACTER OF THE ACCIDENTS OCCURRING DURING THE YEAR, AND TO WHAT SOURCES THEY WERE ATTRIBUTABLE.

Causes.	Fatal.	Serious.	Minor.	Totals.	Percentage.
Falls of roof	70	124	37	231	40.3
Falls of coal	9	31	16	56	9.8
Mine cars	9	92	50	151	26.3
Premature explosions	11	16	1	28	4.9
Explosion of gas	4	7	3	14	2.5
Electric wires	2	2	.....	4	.7
Mules and horses .....	.....	4	3	7	1.2
Falls of timber .....	.....	5	.....	5	.8
Motor	1	5	.....	7	1.2
Shot blowing through rib	2	1	2	5	.8
Mining machines	1	12	2	15	2.6
Miscellaneous	5	25	21	51	8.9
Total	114	324	136	574	100.

TABLE SHOWING THE NUMBER AND CHARACTER OF ACCIDENTS WHICH RESULTED FROM THE PRINCIPAL SOURCES AS REPORTED FROM EACH COUNTY.

Counties.	Fall of Roof.			Fall of Coal.			Injured by Mine Cars.			Premat Ex-plosion			Ex-plosion Fire Damp.			Miscellaneous.			Totals.
	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	
Athens.....	6	5	5	1	4	2	1	14	6	..	2	..	..	..	..	1	11	4	62
Belmont.....	13	22	3	..	2	1	..	7	4	1	1	1	..	..	..	1	4	3	63
Carroll.....	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	5
Columbiana.....	2	9	1	..	1	1	1	1	1	1	2	..	..	..	..	2	4	9	35
Coshocton.....	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	1	..	..	4
Gallia.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Guernsey.....	4	22	2	3	6	4	..	9	8	..	1	..	2	..	1	2	6	1	71
Harrison.....	..	3	3	..	..	1	..	1	2	..	1	..	..	..	..	..	1	1	13
Holmes.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hocking.....	5	5	1	..	2	1	..	12	6	..	..	..	..	..	..	..	1	2	35
Jackson.....	16	11	5	..	1	..	..	8	4	1	4	..	1	2	..	..	4	1	58
Jefferson.....	11	14	2	2	1	1	4	10	5	6	1	..	2	6	..	2	5	3	75
Lawrence.....	..	1	1	..	1	1	..	1	2	..	1	..	..	..	..	..	..	..	7
Mahoning.....	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2
Medina.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meigs.....	1	1	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	5
Morgan.....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Monroe.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Muskingum.....	1	..	..	..	1	..	..	2	1	..	1	..	..	..	..	..	..	..	6
Noble.....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Perry.....	1	11	1	3	2	..	8	3	4	..	..	..	..	..	..	..	7	1	41
Portage.....	..	..	4	..	..	3	..	..	1	..	..	..	..	..	..	..	..	..	8
Scioto.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Stark.....	2	9	6	..	1	1	..	3	5	1	2	..	..	..	..	2	3	4	39
Summit.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Trumbull.....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Tuscarawas.....	4	8	..	..	4	..	..	12	..	1	..	..	..	..	..	..	4	..	33
Vinton.....	1	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	1	..	5
Washington.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wayne.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Totals.....	70	124	37	9	31	16	9	92	50	11	16	1	4	7	3	11	54	29	574

ABLE SHOWING THE NUMBER OF ACCIDENTS AND THEIR CAUSES AS REPORTED TO THE DEPARTMENT FROM NOVEMBER 15, 1887, TO NOVEMBER 15, 1903.

Years.	Falls of roof.	Falls of coal.	Injured by mine cars.	Premature explosion.	Explosion of gas.	Falls down shafts.	Crushed under cage.	Falls from tripole.	Kicked by mule or horse.	Injured by railway cars.	Falls of timber.	No cause given.	Shot blowing through rib.	Injured by miners' pick.	Heart failure.	Electric wires.	Injured by mining machines.	Electric motors.	Miscellaneous.	Totals.
1888	100	47	46	13	4	1	8	3	2	2	1	5	1	1	1	1	1	1	9	238
1889	92	50	48	12	4	2	2	1	4	2	1	3	1	1	1	1	1	1	11	230
1890	109	44	59	13	4	2	1	1	2	1	1	3	1	1	1	1	1	1	7	245
1891	112	26	47	24	6	1	3	1	5	1	4	3	1	1	1	1	1	1	14	242
1892	126	41	73	21	3	1	1	1	4	3	2	1	1	1	1	1	1	1	11	291
1893	118	55	88	17	2	5	1	2	6	5	5	1	3	3	1	1	1	1	14	337
1894	98	39	60	17	5	5	4	1	1	2	3	1	2	1	4	1	1	1	15	257
1895	108	46	67	23	1	1	3	1	4	2	1	1	3	2	1	1	1	1	8	271
1896	133	34	74	20	7	1	2	1	9	2	1	1	3	1	2	1	3	1	10	308
1897	98	48	70	16	5	2	1	1	6	2	1	1	4	2	1	1	7	1	12	277
1898	156	47	69	8	13	1	3	2	3	3	3	1	4	1	2	1	11	1	14	341
1899	153	52	100	20	10	3	6	2	6	5	4	1	3	1	3	1	8	1	13	390
1900	172	62	104	24	6	4	4	1	6	5	4	1	1	3	1	1	9	1	19	424
1901	191	62	147	14	6	2	7	1	13	1	6	1	4	1	1	1	12	6	50	514
1902	223	61	148	22	6	1	1	1	13	1	3	1	5	1	1	1	13	7	29	532
1903	231	56	151	28	14	1	1	1	7	1	5	1	5	1	1	1	15	7	51	574
Total	2,220	770	1,351	292	96	29	46	18	90	31	40	11	39	17	14	11	81	13	287	5,456

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE LIFE LOST, TO THE SERIOUS INJURY AND TO THE TOTAL NUMBER OF FATAL AND SERIOUS ACCIDENTS FOR EACH YEAR SINCE THE CREATION OF THE DEPARTMENT.

Years.	Number of Fatal Accidents.	Number of Serious Accidents.	Number of Tons Mined to the Person Killed or Seriously Injured and Number of Tons to the Total.			Name of Chief Mine Inspector.
			Fatal.	Serious.	Total.	
4.....	20	80	108,919	4,844	31,419	Andrew Roy.
5.....	23	40	202,667	121,606	77,210	"
6.....	13	70	269,999	50,000	42,168	"
7.....	30	39	175,000	134,615	76,087	"
8.....	20	.....	.....	.....	.....	Jas. D. Poston.
9.....	.....	.....	.....	.....	.....	David Owen.
0.....	22	61	292,624	114,754	84,217	Andrew Roy.
1.....	29	.....	283,621	.....	.....	"
2.....	25	.....	378,000	.....	.....	"
3.....	26	.....	316,516	.....	.....	"
4.....	26	40	226,636	143,433	86,932	Thos. B. Bancroft.
5.....	51	32	244,258	153,258	94,170	"
6.....	43	65	194,308	194,772	78,104	"
7.....	36	75	286,158	137,356	92,808	"
8.....	29	79	376,239	138,113	100,934	Robt. M. Haseltine.
9.....	33	52	330,527	209,757	128,322	"
0.....	42	52	280,687	226,708	125,413	"
1.....	44	66	296,595	197,730	118,636	"
2.....	42	93	347,929	157,129	108,170	"
3.....	32	123	463,378	120,553	95,665	"
4.....	45	116	364,672	102,674	73,976	"
5.....	52	152	263,151	90,025	67,078	"
6.....	41	159	314,942	81,211	64,563	"
7.....	40	142	311,221	87,668	68,400	"
8.....	52	155	270,463	90,736	67,913	"
9.....	59	204	269,643	77,985	60,490	"
0.....	68	207	285,686	93,848	70,643	Elmer G. Biddison.
1.....	72	276	282,240	73,627	58,394	"
2.....	81	298	293,818	80,299	63,138	"
3.....	114	324	215,555	75,843	42,810	"

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO.

	1886.		Number of miners for each life lost.	1887.		Number of miners for each life lost.	1888.		Number of miners for each life lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Colorado	165,287	.....	545	149,311	34,456	.....	75,361	27,319	.....
Great Britain	214,909	66,126	497	162,934	.....	551	191,369	.....	602
Illinois	428,571	333,333	.....	303,002	69,017	654	260,512	80,046	535
Indiana	183,494	350,306	.....	227,323	56,830	.....	196,311	157,049	.....
Iowa	235,714	61,111	.....	224,297	52,336	799	177,401	49,832	463
Kansas .....	.....	.....	.....	256,172	163,019	929	154,826	45,874	631
Kentucky	50,654	21,709	206	.....	.....	.....	150,383	105,674	210
Maryland .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Missouri .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nova Scotia	194,309	129,772	474	238,691	167,083	.....	888,064	59,204	2,325
Ohio	175,311	53,672	440	286,158	137,356	618	376,239	138,113	765
Pennsylvania .....	.....	.....	.....	169,327	151,900	512	166,532	56,849	361
Tennessee .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia .....	.....	.....	.....	.....	.....	.....	191,984	63,152	346

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1889.			1890.			1891.		
	Number of tons mined for each accident.		Number of miners for each life lost.	Number of tons mined for each accident.		Number of miners for each life lost.	Number of tons mined for each accident.		Number of miners for each life lost.
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Colorado .....	.....	.....	.....	104,375	31,385	239	121,126	27,230	227
Great Britain	178,227	.....	630	.....	.....	.....	.....	.....	.....
Illinois	333,745	69,738	716	286,316	51,955	539	261,012	42,672	549
Indiana .....	.....	.....	.....	1,239,429	578,400	936	.....	.....	.....
Iowa	98,600	52,772	321	331,709	132,683	824	206,776	88,618	507
Kansas .....	.....	.....	.....	314,506	125,802	955	250,339	78,678	813
Kentucky .....	.....	.....	.....	233,089	101,343	406	184,383	.....	543
Maryland	156,136	56,792	378	.....	.....	.....	330,084	285,063	437
Missouri	222,347	111,173	514	243,739	87,049	765	147,223	82,813	413
Montana .....	.....	.....	1,818	.....	.....	.....	.....	.....	.....
Nova Scotia	219,539	97,571	646	220,444	94,479	591	681,594	638,996	1,915
Ohio	330,527	209,757	615	280,687	226,708	456	296,595	65,910	545
Pennsylvania	150,202	56,789	144	154,257	58,235	181	181,980	64,814	287
Tennessee .....	.....	.....	.....	.....	.....	.....	109,295	43,718	253
Utah .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia .....	.....	206,358	.....	206,358	54,450	327	202,262	104,020	362

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1892.		1893.		1894.	
	Fatal.	Non-fatal.	Fatal.	Non-fatal.	Fatal.	Non-fatal.
	Number of tons mined for each accident.		Number of tons mined for each accident.		Number of tons mined for each accident.	
	Number of miners for each life lost.		Number of miners for each life lost.		Number of miners for each life lost.	
Alabama	110,330	30,170	310,000	30,371	229,200	470
Colorado	313,372	46,114	146,234	49,503	157,580	534
Great Britain	236,569	166,474	289,124	124,539	237,688	32,848
Illinois	202,373	87,988	198,132	85,481	198,809	134,906
Indiana	378,412	151,364	159,133	47,245	138,898	68,136
Iowa	510,818	170,273	221,687	132,090	295,719	155,642
Kansas	150,864	73,592	665,549	415,988	443,140	238,614
Kentucky	161,898	48,569	151,926	122,709	125,438	82,271
Maryland	347,929	58,634	336,543	35,802	364,672	102,674
Missouri	177,983	76,166	436,120	50,608	151,521	66,776
Nova Scotia	166,619	80,437	167,711	68,270	76,688	122,700
Ohio	180,836	40,186	128,638	24,396	181,739	52,205
Pennsylvania	20,738	27,157	418,049	41,804	.....	.....
South Dakota	241,969	81,167	134,317	31,812	.....	.....
Tennessee .....	.....	.....	151,790	77,510	.....	.....
Utah .....	.....	.....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....	.....	.....
West Virginia .....	.....	.....	.....	.....	.....	.....

AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1895.		Number of miners for each life lost.	1896.		Number of miners for each life lost.	1897.		Number of miners for each life lost.
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	150,150	.....	217	205,201	.....	353	151,122	.....	326
Colorado	145,195	29,553	320	49,582	57,146	99	.....	.....	715
Great Britain	.....	.....	.....	190,596	.....	696	207,739	.....	490
Illinois	236,478	29,312	515	256,969	29,444	429	290,910	38,751	.....
Indiana	187,438	81,360	343	145,290	61,638	.....	264,225	176,170	.....
Iowa	159,792	76,091	550	153,282	75,010	498	172,715	70,365	531
Kansas	319,084	75,972	936	265,979	127,669	734	549,468	109,893	1,450
Kentucky	400,971	178,209	983	530,580	167,551	1,258	275,338	122,372	645
Maryland	386,611	267,653	.....	.....	.....	.....	.....	.....	.....
Missouri	175,621	152,205	557	151,272	121,007	412	303,674	105,625	1,639
Nova Scotia	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	263,151	90,025	431	314,942	81,211	694	311,221	87,668	720
Pennsylvania	178,600	68,715	397	144,205	84,419	342	177,350	91,836	424
South Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	8,530	.....	138	121,077	50,259	296	237,211	.....	633
Utah	.....	.....	.....	125,811	55,916	.....	.....	.....	.....
Washington	33,249	48,489	.....	150,316	40,084	.....	190,027	31,671	.....
West Virginia	118,965	.....	224	205,692	101,287	372	209,040	77,607	346

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Continued.

	1898.		Number of miners for each life lost	1899.		Number of miners for each life lost	1900.		Number of miners for each life lost
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	143,705	.....	220	187,119	213,851	323	223,603	461,538	386
Colorado	.....	.....	.....	.....	.....	.....	189,508	87,234	.....
Great Britain	224,991	.....	.....	.....	.....	.....	.....	.....	.....
Illinois	247,991	42,464	467	278,982	39,254	440	267,595	41,168	419
Indiana	233,951	.....	.....	390,998	43,444	424	349,059	35,301	549
Iowa	.....	.....	.....	247,470	190,365	401	98,943	57,892	194
Kansas	.....	.....	.....	256,056	91,042	637	.....	.....	.....
Kentucky	590,355	.....	1,401	643,634	75,313	1,379	295,334	54,572	601
Maryland	1,031,611	133,111	1,143	.....	.....	.....	437,863	.....	663
Missouri	315,350	105,117	821	227,986	138,752	.....	299,502	130,175	764
Nova Scotia	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	270,403	90,736	545	146,798	165,146	475	285,692	54,569	466
Pennsylvania	332,852	140,278	.....	269,643	77,985	430	299,300	135,786	421
Tennessee	162,499	71,738	411	283,167	184,451	394	390,404	.....	869
Utah	224,432	48,093	.....	186,806	50,454	.....	5,904	19,587	8
Washington	197,251	23,670	187	42,613	23,733	73	73,243	31,000	128
West Virginia	184,026	132,316	237	182,529	29,965	221	133,949	107,312	154

TABLE SHOWING THE NUMBER OF TONS OF COAL MINED TO THE TOTAL NUMBER OF ACCIDENTS IN OTHER STATES
AND COUNTRIES SINCE 1886 AS COMPARED WITH OHIO—Concluded.

	1901.		Number of miners for each life lost.	1902.		Number of miners for each life lost.	1903.		Number of miners for each life lost.
	Number of tons mined for each accident.			Number of tons mined for each accident.			Number of tons mined for each accident.		
	Fatal.	Non-fatal.		Fatal.	Non-fatal.		Fatal.	Non-fatal.	
Alabama	218,186	.....	345	206,589	.....	358	205,276	.....	339
Colorado	108,698	.....	145	103,054	88,508	123	194,382	70,684	257
Illinois	263,716	.....	311	303,245	73,944	465	224,073	85,257	319
Indiana	292,466	36,182	504	265,133	60,436	547	181,683	45,011	.....
Iowa	165,232	102,704	179	210,776	92,741	539	262,152	108,803	578
Kansas	267,806	.....	439	180,359	73,668	321	167,464	61,596	297
Kentucky .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland	426,074	.....	448	.....	.....	.....	.....	.....	.....
Missouri	253,333	.....	615	406,357	225,754	916	250,902	157,975	539
Nova Scotia .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	282,240	45,976	465	293,818	53,058	462	215,555	53,420	363
Pennsylvania	268,818	123,345	391	216,987	114,920	297	257,985	99,149	377
Tennessee	86,038	47,321	191	18,727	100,770	39	185,029	68,725	372
Utah	153,607	115,205	198	205,179	91,191	308	251,739	50,348	312
Washington	92,748	30,171	178	91,266	30,050	179	127,619	38,439	195
West Virginia	154,738	111,755	249	194,659	97,736	.....	144,111	102,752	248

FATAL ACCIDENTS FROM NOVEMBER 15, 1902, TO NOVEMBER 15, 1903.

Date.	Name.	Nationality	Age.	Cause of Casualty.	Name of Mine.	County.
1902						
November 24.	J. C. Whitehair.....	American.....	52	Killed by a fall of slate.....	281.....	Athens.
November 25	Harvey Beher.....	American.....	30	Killed by a fall of roof.....	Trenton.....	Tuscarawas.
November 26	John A. Beaver.....	American.....	23	Killed by a fall of slate.....	Carl No. 2.....	Gallia.
November 26	Jas. E. Barrett.....	American.....	41	Killed by a fall of roof.....	No. 17.....	Athens.
December 1.	Jos. Volacic.....	Slav.....	38	Killed by a fall of coal.....	Old Orchard.....	Guernsey.
December 2.	Pietro Sankrick.....	Italian.....	23	Burned by an explosion of powder. Died December 5th.....	United States No. 9.....	Jefferson.
December 3.	Ebenezer Moses.....	American.....	33	Injured by mine cars. Died December 16.....	Sedalia.....	Athens.
December 9.	Francesco Imbaliasso.....	Italian.....	70	Killed by a premature explosion.....	Indian Run.....	Stark.
December 12.	Steve Demeter.....	Hungarian.....	26	Killed by a fall of soapstone.....	Tin Plate.....	Belmont.
December 15.	George Dever.....	American.....	37	Killed by a fall of slate.....	Cochran.....	Belmont.
December 24.	Elmer Monypenny.....	American.....	30	Killed by a shot blowing through the rib.....	Little Giant Clay.....	Jefferson.
December 30.	Ben Rule.....	American.....	44	Killed by a fall of slate.....	McKitterick.....	Jackson.
1903.						
January 7.....	Jos. Oswort, Jr.....	Hungarian.....	18	Killed by a fall of coal.....	Congo No. 301.....	Perry.
January 7.....	Leonard Lauer.....	American.....	22	Killed by a fall of slate.....	Center Valley.....	Tuscarawas.
January 7.....	Michael Carey.....	Irish.....	66	Found dead in mine; death due to suffocation from powder smoke.....	Cherry Valley.....	Columbiana.
January 13.....	John C. Pollock.....	American.....	56	Killed by a fall of coal.....	Imperial.....	Guernsey.
January 14.....	Amos Corbett.....	American.....	36	Killed by a fall of soapstone.....	Nail Mill.....	Belmont.
January 17.....	John Gearing.....	German.....	28	Killed by a fall of slate.....	Milton No. 4.....	Jackson.
January 18.....	Casper Bentinger.....	American.....	26	Injured by a fall of slate; died January 24th.....	Detroit.....	Guernsey.
January 19.....	Roy Nulf.....	American.....	16	Killed on the incline by being run over by mine cars.....	Fairfield No. 2.....	Columbiana.
January 19.....	Steve Garsie.....	Hungarian.....	35	Killed by coming in contact with an electric wire.....	Brilliant.....	Jefferson.
January 22.....	John Krebs.....	German.....	64	Killed by a fall of bone coal.....	Upton No. 1.....	Perry.
January 26.....	Tony Renola.....	Italian.....	20	Killed by a fall of stone.....	Gaylord.....	Belmont.
January 28.....	Alex. Rubpets.....	Polish.....	19	Injured by an explosion of powder; died February 2.....	Taggart.....	Belmont.
January 31.....	John Smook.....	German.....	56	Injured by a fall of stone; died February 25.....	Wheeling Creek.....	Belmont.
February 10.....	Fred Melton.....	American.....	29	Killed by a fall of slate.....	Milton No. 4.....	Jackson.
February 14.....	Alfred Lafollet.....	American.....	29	Killed by falling from cage.....	Black Top.....	Guernsey.
February 16.....	Wm. Ryan.....	American.....	27	Killed by a fall of stone.....	Tin Plate.....	Belmont.
February 17.....	Edw. Rosser.....	American.....	27	Killed by a fall of slate.....	Lahrig No. 3.....	Athens.
February 17.....	James McConaughy.....	American.....	17	Killed by being run over by mine cars.....	Edgar No. 2.....	Jefferson.
February 24.....	Enoch Venesky.....	Polish.....	36	Injured by a premature explosion; died March 4.....	United States No. 3.....	Jefferson.
March 2.....	David Plunkett.....	English.....	43	Killed by being caught between motor and rib.....	Slope.....	Columbiana.
March 4.....	J. D. Davis.....	American.....	33	Killed by a fall of rock.....	Superior No. 1.....	Jackson.
March 9.....	Ellsworth Dow.....	American.....	40	Killed by a fall of rock.....	Buckeye.....	Jackson.
March 11.....	August Vossick.....	American.....	18	Killed by a fall of rock.....	No. 8.....	Stark.
March 16.....	Anthony Wear.....	Hungarian.....	24	Injured in a powder explosion; died March 24.....	Edgar No. 1.....	Jefferson.
March 16.....	Julius Wenz.....	Hungarian.....	23	Injured in a powder explosion; died March 22.....	Superior No. 9.....	Jackson.
March 18.....	George Levering.....	American.....	41	Killed by a fall of slate.....	No. 10.....	Stark.
March 18.....	James Murphy.....	American.....	30	Injured by a fall of bone coal; died April 13.....	Nicholson.....	Guernsey.
April 6.....	James Murphy.....	American.....	62	Injured by a fall of slate; died April 13.....	Nicholson.....	Guernsey.

April 9.	Paul Meao.	Slav.	26	Killed by a fall of slate.	Walounding.	Guernsey.
April 23.	E. W. Collins.	American.	26	Killed by a fall of coal.	Central.	Guernsey.
April 24.	George Francis.	American.	21	Found dead in the mine; electric wire.	Luhig No. 2.	Athens.
April 24.	Claude Clifton.	American.	28	Killed by a fall of coal.	Gt. Western Clay.	Jefferson.
April 26.	George Close.	American.	36	Killed by a fall of slate.	New Shaft.	Columbiana.
April 27.	George Brick.	German.	62	Leg and two ribs broken by a fall of stone; died May 6.	Acme.	Tuscarawas.
April 30.	Geo. F. Dell.	American.	42	Killed by a fall of slate.	Tin Plate.	Belmont.
May 4.	Chas. Satoeki.	Polish.	63	Injured by a fall of slate; died June 16.	United States No. 8.	Jefferson.
May 4.	Reese Phillips.	Welsh.	63	Killed by being caught between cage and bottom of shaft.	Edm. Run No. 4.	Stark.
May 8.	A. J. Hawley.	American.	31	Killed by a fall of roof.	Empire.	Belmont.
May 11.	Andy Ventecio.	Slav.	32	Killed by a fall of slate.	Barton.	Belmont.
May 15.	Joe Yagari.	Slav.	24	Killed by a fall of slate.	U. S. No. 9.	Jefferson.
May 16.	Sid Colawcheck.	Slav.	28	Killed by a fall of draw-slate.	U. S. No. 9.	Jefferson.
May 21.	Edw. Middlemas.	American.	22	Killed by a fall of stone.	Edgar No. 2.	Jefferson.
May 21.	Michael Mommelle.	Italian.	19	Killed by a fall of stone.	Edgar No. 2.	Jefferson.
May 23.	Daniel Doherty.	Irish.	65	Killed by being caught between mine car and door.	No. 21.	Perry.
June 5.	Frank Collins.	American.	23	Killed by a fall of slate.	Small country bank.	Hocking.
June 6.	James Sargeant.	American.	28	Killed by a fall of slate.	Minker Run.	Athens.
June 13.	Dow Bennett.	American.	19	Killed by a fall of slate.	Jobs No. 2.	Hocking.
June 17.	Wm. J. Hickman.	English.	22	Killed by a fall of slate.	Lost Run.	Hocking.
June 19.	Geo. Butterfield.	English.	37	Both legs broken by a fall of coal; died June 20.	No. 21.	Perry.
June 26.	John Nagy.	Hungarian.	19	Killed by a fall of slate.	Long Run.	Jefferson.
June 27.	John Johnson.	Polish.	26	Killed by a fall of slate.	No. 20.	Perry.
June 28.	Henry Fisher.	American.	58	Killed by being run over by loaded mine cars.	Jefferson No. 2.	Jefferson.
June 29.	Domineck Serena.	English.	50	Killed by a fall of slate.	Jobs No. 2.	Hocking.
July 13.	Chas. H. Gabriel.	Italian.	22	Injured by a powder explosion; died July 14.	Jefferson No. 1.	Jefferson.
July 15.	Nicholas Franges.	American.	65	Killed by a fall of stone.	Wagoner.	Athens.
July 21.	Frank Bok.	German.	35	Killed by a fall of stone.	Connor No. 2.	Wayne.
July 22.	Michael Hegitis.	Hungarian.	55	Killed by being caught between mine car and post.	McFayden.	Jefferson.
July 24.	M. S. Spencer.	Hungarian.	38	Killed by a fall of coal.	No. 281.	Athens.
July 27.	Albert Houdersbeld.	American.	47	Killed by a fall of slate.	Rolling Mill.	Meigs.
July 28.	U. G. Alpin.	American.	54	Killed by a fall of stone while sinking shaft.	Senecaville.	Guernsey.
July 29.	Grant McClung.	American.	21	Injured by a fall of slate; died August 4.	Superior No. 8.	Jefferson.
July 29.	Jas. R. Beare.	American.	53	Killed by a fall of slate.	Superior No. 8.	Jackson.
July 30.	Edw. Lehman.	American.	53	Killed by a fall of slate and soapstone.	Black Diamond.	Hocking.
August 1.	Sandy Preston.	African.	14	Killed by a fall of coal.	No. 268.	Perry.
August 7.	Lance Hall.	American.	53	Killed by a shot blowing through the rib.	Wade.	Coshocton.
August 12.	Fredrick Sterling.	American.	51	Injured by a fall of slate; died August 20.	Walnut Hill.	Jefferson.
August 21.	Richard Dowell.	African.	49	Skull fractured by a premature explosion; died October 4.	Superior No. 1.	Jefferson.
August 21.	Wm. Brooke.	American.	47	Killed by a blast of powder.	Zerbe.	Jefferson.
August 23.	Joe McAllister.	American.	18	Killed by a fall of slate.	Sedalia.	Athens.
August 25.	Thomas White.	American.	40	Killed by a powder blast.	Labon.	Columbiana.
August 26.	Peter Weber.	German.	41	Killed by a fall of rock.	Masillon No. 1.	Stark.
August 28.	Elisha Gifford.	American.	57	Killed by a fall of slate.	Star No. 4.	Jackson.
August 28.	John Gifford.	American.	50	Killed by a fall of slate.	Star No. 4.	Jackson.
September 3.	Thomas Abram.	American.	48	Killed by a fall of slate.	Jackson Hill.	Jackson.
September 8.	John Clark.	American.	35	Killed by a fall of slate.	Trace.	Vinton.
September 12.	Charles Walsh.	American.	21	Killed by a fall of slate.	Wellston No. 3.	Jackson.
September 14.	Lava Sagar.	Hungarian.	21	Killed by a fall of soapstone.	Connor No. 2.	Jefferson.
September 14.	Emilio Tadei.	Austrian.	21	Killed by a fall of stone.	West Goshen.	Tuscarawas.
September 19.	Benj. Evans.	American.	26	Killed by bucket tipping and precipitating him to bottom of shaft.	No. 18.	Stark.

FATAL ACCIDENTS—Concluded.

Date.	Name.	Nationality.	Age.	Cause of Casualty.	Name of Mine.	County.
September 21	Steve Anjier.....	Hungarian.....	24	Killed by a fall of stone; died September 22.	McFayden.....	Jefferson
September 21	Daniel Horbert.....	American.....	54	Killed by a fall of slate.	New Shaft.....	Columbiana,
September 21	Nick Yurik.....	Austrian.....	22	Injured by an explosion of gas; died September 29.	LaBelle.....	Jefferson.
September 21	Frank Derk.....	Polish.....	28	Injured by an explosion of gas; died September 28th.	Standard.....	Jefferson.
September 22	David Edwards.....	Welsh.....	69	Killed by a fall of slate.	Standard.....	Jackson.
September 22	Dom. Di Ambrosia.....	Italian.....	22	Killed by a fall of slate.	Empire No. 2.....	Belmont.
September 29	Marion Mercer.....	American.....	27	Killed by a fall of stone.	Magnolia.....	Carroll.
October 1	Edward Kelley.....	American.....	26	Killed by a fall of stone.	Wheeling Creek.....	Belmont.
October 6	Jos. Gill.....	American.....	70	Leg fractured and scalp wounded by a fall of coal; died October 24.	Brilliant.....	Jefferson.
October 14	James Lotten.....	American.....	49	Injured by an explosion of gas; died October 24.	Walhounding.....	Guernsey.
October 14	Frederick Donley.....	American.....	14	Injured by an explosion of gas and instantly killed.	Walhounding.....	Guernsey.
October 15	Michael Gutchowska.....	Polish.....	35	Injured by a mining machine; died October 17.	Crescent No. 3.....	Belmont.
October 20	A. M. Clark.....	American.....	48	Killed by a fall of draw-slate.	Fuhrart No. 1.....	Jackson.
October 21	Matthew Golo.....	Slav.....	31	Killed by a fall of slate.	Detroit.....	Guernsey.
October 22	James Gortray.....	Hungarian.....	36	Killed by a fall of slate.	Barton.....	Guernsey.
October 27	Sam'l Wartenbee.....	American.....	60	Killed by a fall of slate.	Wartenbee Bank.....	Belmont.
October 29	Walter J. Williams.....	American.....	20	Killed by being caught between mine car and side.	Santoy No. 1.....	Jackson.
October 29	George Peartos.....	Slav.....	35	Killed by a fall of coal and slate.	Maple Hill.....	Perry.
October 29	Basilio Buradelli.....	Italian.....	35	Killed by mine cars.	McFayden.....	Belmont.
November 3	Reed Huff.....	American.....	21	Killed by mine cars.	McFayden.....	Jefferson.
November 4	George Darrow.....	American.....	28	Killed by a premature explosion.	Mohr & Minton.....	Jefferson.
November 12	D. C. Evans.....	Welsh.....	59	Killed by a fall of slate.	Superior No. 1.....	Vinton.
November 13						Jackson.

SERIOUS ACCIDENTS FROM NOVEMBER 15, 1902, TO NOVEMBER 15, 1903.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1902.							
Nov. 17	Lov. Cavy.	American.	27	Head and hip injured.	Fall of coal.	Imperial.	Guernsey.
Nov. 18	Andy Samond.	Slav.	27	Shoulder and collar bone broken.	Falling from tippie.	Long Run.	Jefferson.
Nov. 18	John Staffel.	Slav.	20	Shoulder blade fractured.	Caught between mine cars.	Edgar No. 1.	Jefferson.
Nov. 20	John Hwig.	German.	19	Hand injured.	Caught between mine car and post.	No. 5.	Stark.
Nov. 24	Frank McGraner.	American.	20	Leg broken.	Thrown under mine car.	Lubrig No. 1.	Athens.
Nov. 24	John A. Greene.	American.	45	Seriously injured.	Fall of slate.	New Pittsburg No. 1.	Hocking.
Nov. 25	Frank Wargo.	Hungarian.	25	Hip dislocated and injured internally.	Fall of slate.	Connor No. 2.	Jefferson.
Nov. 26	Aaron Nyettes.	Hungarian.	24	Foot injured.	Falling from cutting machine.	Long Run.	Jefferson.
Nov. 28	Wm. Bernard.	American.	32	Body and leg bruised.	Fall of slate.	Leathernwood.	Guernsey.
Nov. 28	Cris Roby.	American.	56	Leg broken.	Fall of slate.	Leathernwood.	Guernsey.
Nov. 28	Lewis Roby.	German.	50	Leg injured.	Fall of slate.	Leathernwood.	Guernsey.
Nov. 29	George Rogers.	American.	30	Hand injured.	Mine car jumping the track.	East Graham No. 2.	Tuscarawas.
Nov. 29	Benj. Rogers.	American.	36	Wrist broken.	Mining machine.	Lyonsdale.	Perry.
Dec. 1	Joe Thompson.	American.	15	Three fingers blown off.	Explosion of powder.	Pocock No. 3.	Stark.
Dec. 2	Frederick Kattenbach.	American.	23	Hand crushed.	Caught between two mine cars.	Carbondale No. 3.	Athens.
Dec. 2	Albert Spacobiński.	Polish.	45	Hand injured.	Coupling car on tippie.	U. S. No. 8.	Jefferson.
Dec. 3	Joe Thompson.	Polish.	25	Finger injured.	Coupling car on tippie.	U. S. No. 8.	Jefferson.
Dec. 4	Richd. Grafton.	English.	40	Body badly burned.	Spark igniting keg of powder.	Jones & Morgan No. 3.	Jackson.
Dec. 6	Edw. Fuller.	American.	21	Ankle injured.	Mine car jumping the track.	Mass. Pocock.	Tuscarawas.
Dec. 6	John Collins.	Italian.	24	Ankle injured.	Fall of scapstone.	Connor No. 1.	Jefferson.
Dec. 8	Peter Beckman.	French.	56	Leg broken and hip dislocated.	Fall of scapstone.	Edgar No. 2.	Jefferson.
Dec. 9	J. W. Smith.	American.	32	Arm injured.	Coal falling down shaft.	Ideal.	Guernsey.
Dec. 9	Chas. Williams.	American.	49	Collar bone broken.	Fall of coal.	Stetler.	Tuscarawas.
Dec. 12	John Slaw.	Swiss.	52	Back injured.	Fall of stone.	Somerdales No. 2.	Tuscarawas.
Dec. 12	Edward Hiles.	American.	35	Wrist fractured.	Caught between mine car and roof.	Walnut Hill.	Muskingum.
Dec. 13	G. S. Cassinick.	Slav.	39	Hips and injured two ribs broken.	Fall of slate.	Empire No. 2.	Belmont.
Dec. 13	Antonia Santorica.	Italian.	33	Both legs broken.	Fall of slate.	Empire No. 2.	Belmont.
Dec. 13	John Wells.	English.	64	Hip injured.	Mine car jumping the track.	Fairview.	Belmont.
Dec. 15	George Claws.	American.	26	Foot injured.	Caught between mine cars.	O. & W. Va.	Belmont.
Dec. 15	Marcel Luigi.	Italian.	20	Foot injured.	Fall of stone.	U. S. No. 9.	Jefferson.
Dec. 16	Wm. Kutz.	American.	39	Bone in foot broken.	Fall of shale.	McGinty.	Stark.
Dec. 17	Frank Wykner.	American.	26	Arm broken.	Falling under mine car.	Doanville.	Athens.
Dec. 18	Isaac Hoge.	American.	45	Hand injured.	Caught between mine cars.	Oakdale.	Athens.
Dec. 19	John Borrell.	German.	34	Hand injured.	Struck by iron casting falling down shaft.	Brookfield.	Stark.
Dec. 20	W. S. Cline.	American.	32	Three ribs broken and hip bruised.	Caught between mine cars.	Diamond No. 3.	Muskingum.

SERIOUS ACCIDENTS—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
Dec. 22.	Revarato Tolotto.	Italian.	30	Leg broken.	Fall of slate.	West Goshen.	Tuscarawas.
Dec. 26.	Chas. Saylor.	English.	36	Arm broken.	Falling from mine cars.	Jobs No. 2.	Hocking.
Dec. 26.	Isaac Jones, Jr.	English.	16	Leg injured and toes taken off.	Run over by mine cars.	No. 17.	Athens.
Dec. 27.	Henric Zanini.	Italian.	25	Back and arm injured.	Fall of draw-slate.	West Goshen.	Tuscarawas.
Dec. 27.	Bartlo Gigt.	Italian.	20	Face and arms burned.	Explosion of powder smoke.	West Goshen.	Tuscarawas.
1903.							
Jan. 2.	Arnest Long.	American.	18	Foot injured.	Mine car leaving the track.	Kings.	Guernsey.
Jan. 2.	R. J. Sell.	American.	45	Hand injured.	Run over by mine car.	Grace.	Jackson.
Jan. 3.	J. C. Pollock.	American.	55	Hips crushed and leg broke.	Fall of coal.	Imperial.	Guernsey.
Jan. 5.	George Savage.	English.	50	Seriously injured.	Fall of slate.	New Shaft.	Columbiana.
Jan. 5.	Dora Pedicord.	American.	39	Head cut and hand injured.	Fall of soapstone.	Nail Mill.	Belmont.
Jan. 7.	Alex. Buzzar.	Hungarian.	28	Leg broken.	Fall of stone.	Long Run.	Jefferson.
Jan. 8.	Samuel Leper.	American.	20	Arm broken.	Mine car jumping the track.	No. 3.	Perry.
Jan. 9.	John Mosco.	Slav.	43	Foot injured.	Fall of slate.	Cisco.	Guernsey.
Jan. 9.	Andy Bostie.	Slav.	35	Foot and breast bruised.	Fall of draw-slate.	Ideal.	Guernsey.
Jan. 10.	Arthur Kettler.	American.	21	Finger injured.	Caught in mine car and chain.	Massillon No. 1.	Stark.
Jan. 12.	Roy Green.	American.	18	Leg injured.	Caught between mine car and post.	Grace.	Jackson.
Jan. 13.	Otto Costy.	Hungarian.	54	Back injured.	Fall of coal.	Somerdale No. 2.	Tuscarawas.
Jan. 14.	Jas. Marling.	American.	36	Foot injured.	Struck by motor.	Nail Mill.	Belmont.
Jan. 14.	Charles Johnson.	American.	32	Head and back injured.	Caught in a mining machine.	Luhrig No. 1.	Perry.
Jan. 14.	Wm. Manna.	Austrian.	38	Face and hands burned.	Explosion of powder.	Beaver Dam No. 1.	Athens.
Jan. 15.	Thomas Zuptle.	American.	19	Arm broken.	Caught between mine car and roof.	McFayden.	Tuscarawas.
Jan. 15.	E. Coach.	American.	32	Leg broken and shoulder bruised.	Fall of coal.	Luhrig.	Jefferson.
Jan. 17.	John Poolick.	Slav.	47	Foot injured.	Fall of stone.	U. S. No. 9.	Athens.
Jan. 17.	Frank Shope.	German.	29	End of finger cut off.	Throwing spreader on end of car.	Newcastle.	Jefferson.
Jan. 18.	John Lawlas.	German.	33	Head injured.	Fall of slate.	Cement.	Lawrence.
Jan. 19.	Otto Shane.	German.	45	Leg broken.	Fall of coal.	No. 1.	Stark.
Jan. 20.	Samuel Miller.	American.	38	Foot injured.	Run over by mine cars.	No. 3.	Perry.
Jan. 20.	Ralph Williams.	American.	18	Hip inj. and back sprained.	Caught between water-box and rib.	Carbondale No. 3.	Athens.
Jan. 21.	Len Sines.	American.	67	Rib broken.	Struck by prop.	No. 9.	Perry.
Jan. 21.	Wm. Robinson.	American.	37	Seriously injured.	Explosion of powder.	No. 10.	Muskingum.
Jan. 22.	Samuel Smith.	American.	22	Leg broken.	Fall of rock.	New Crescent.	Perry.
Jan. 22.	Dave Thomas.	Welsh.	25	Arm broken.	Caught between mine car and rib.	Rolling Mill.	Melara.
Jan. 22.	Chas. Koon.	American.	22	Leg broken.	Run over by mine car.	New Pittsburg No. 7.	Hocking.
Jan. 23.	Wm. Puck.	American.	26	Back injured.	Fall of slate.	Lyonisdale.	Perry.
Jan. 24.	Henry Ducky.	American.	40	Back and hips injured.	Fall of slate.	Superior No. 5.	Jackson.
Jan. 24.	Wm. Killingsworth.	American.	26	Head cut.	Caught between mine cars.	Ideal.	Guernsey.
Jan. 26.	Frank Skavagdy.	Italian.	21	Back injured.	Fall of stone.	Gaylord.	Belmont.

Jan. 26.	George Boyles.	American.	24	Leg broken.	Fall of coal.	No. 201.	Athens.
Jan. 28.	Samuel Chipko.	Pollah.	28	Leg broken.	Fall of stone.	U. S. No. 9.	Jefferson.
Jan. 28.	Joe. Goodawa.	Pollah.	17	Seriously injured.	Explosion of powder.	Taggart.	Belmont.
Jan. 28.	James Pool.	American.	35	Seriously injured.	Fall of slate.	No. 253.	Perry.
Jan. 29.	Geo. Goodline.	American.	26	Leg injured.	Caught between machine frame and rib.	Buckeye No. 5.	Jefferson.
Feb. 1.	Frank Statter.	Hungarian.	36	Shoulder and arm sprained.	Fall of slate.	Jefferson No. 1.	Athens.
Feb. 2.	Thomas Stewart.	American.	43	Knee injured.	Slipping while in the act of lifting.	Belle Run.	Tuscarawas.
Feb. 2.	David Robertson.	American.	38	Leg injured.	Mine cars.	Mass. Peacock.	Tuscarawas.
Feb. 6.	George Brown.	American.	32	Arm broken.	Caught between mine car and post.	Beaver Dam No. 1.	Jefferson.
Feb. 7.	Thomas Gentile.	Italian.	30	Side and foot injured.	Fall of stone.	U. S. No. 9.	Jefferson.
Feb. 12.	John Pollick.	Hungarian.	27	Back injured.	Fall of stone.	Long Run.	Jackson.
Feb. 14.	Wm. Ward.	American.	37	Ankle injured.	Mine cars.	Fluhart No. 1.	Athens.
Feb. 14.	Jacob Heavner.	American.	30	Hands burned.	Coming in contact with an electric wire.	New Pittsburg No. 5.	Guernsey.
Feb. 16.	Ernest Long.	American.	35	Leg broken.	Mine car jumping track.	King No. 2.	Hocking.
Feb. 16.	Walter Glespy.	American.	38	Seriously injured.	Caught between mine car and rib.	King No. 2.	Columbiana.
Feb. 17.	Joe. G. Reese.	Welsh.	21	Knee injured.	Fall of slate.	McNabb.	Columbiana.
Feb. 17.	Andrew Toat.	Slav.	52	Three ribs broken and hand injured.	Fall of coal.	East Goshen No. 2.	Tuscarawas.
Feb. 17.	Frank Podmilisak.	Italian.	33	Leg broken.	Fall of stone.	Wheeling Creek.	Belmont.
Feb. 18.	Wm. Kerr.	American.	33	Leg broken.	Fall of slate.	Star No. 4.	Jackson.
Feb. 20.	Julius Martena.	Hungarian.	34	Foot injured.	Fall of slate.	Indian Run.	Stark.
Feb. 20.	Vince Stedde.	Hungarian.	21	Arm broken.	Fall of coal.	Barton.	Belmont.
Feb. 20.	Finer Dailey.	American.	21	Hand injured.	Caught between railway cars and coal.	Turkey Foot.	Summit.
Feb. 21.	Wm. Turvey.	American.	22	Rib fractured.	Fall of slate.	Old Orchard.	Guernsey.
Feb. 21.	Andy Kuska.	Hungarian.	43	Leg injured.	Caught by mine car.	No. 9.	Perry.
Feb. 23.	Gravini Savorini.	Italian.	37	Arm, face and legs burned.	Explosion of powder.	Clover Leaf.	Harrison.
Feb. 23.	Joe Yencro.	Slav.	40	Hip broken.	Mine car jumping the track.	Kings.	Guernsey.
Feb. 24.	Samuel Newman.	American.	22	Hips and back injured.	Fall of slate.	Harford.	Guernsey.
Feb. 24.	Frederick Frazier.	American.	22	Hips and back injured.	Fall of slate.	Silver Run.	Meigs.
Feb. 25.	Al Sping.	American.	44	Leg injured.	Fall of slate.	Harford.	Guernsey.
Feb. 25.	Wm. Histon.	Irish.	38	Leg injured.	Fall of roof.	Lyonsdale.	Tuscarawas.
Feb. 25.	Unley Moore.	American.	57	Legs bruised.	Fall of draw-slate.	East Goshen No. 1.	Perry.
Feb. 25.	Wm. Hallerman.	American.	45	Back injured.	Fall of draw-slate.	Superior No. 2.	Jackson.
Feb. 26.	Card Mice.	American.	16	Leg broken.	Struck by mine car.	Hiawatha No. 10.	Athens.
Feb. 26.	Harry Shockley.	American.	24	Rib broken.	Caught between mine car and rib.	Old Orchard.	Guernsey.
Feb. 27.	Al Vance.	American.	55	Rib broken.	Fall of slate.	No. 2.	Stark.
Feb. 27.	John Adams.	English.	57	Back injured.	Fall of rock.	Beggs.	Belmont.
March 3.	James mos.	American.	50	Head and face badly injured.	Breaking of prop while setting.	Stark.	Stark.
March 6.	Henry Sifton.	German.	30	Body badly bruised.	Explosion of powder.	New Pittsburg No. 4.	Athens.
Mar. 6.	Joe McGaffey.	American.	30	Foot injured necessitating amputation.	Fall of slate.	Hiawatha No. 10.	Athens.
Mch. 7.	Gary Coleman.	Hungarian.	25	Belly burned.	Caught between car and post.	West Goshen.	Tuscarawas.
Mch. 7.	Joe. Merrifill.	Italian.	45	Hand and left foot injured.	While firing a shot of dynamite.	Fuhrart No. 1.	Jackson.
Mch. 8.	George Wilson.	American.	16	Hand injured.	Fall of coal.	Zerbe.	Jefferson.
Mch. 10.	Alex. McKinnon.	Scott.	65	Hand and head injured.	Fall of coal.	Boggs.	Belmont.
Mch. 11.	Ambrose Miller.	American.	45	Back broken.	Falling from an incline.	Jones No. 3.	Jackson.
Mch. 12.	Wm. Hamilton.	American.	47	Back and legs injured.	Fall of draw-slate.	Kimberly.	Athens.
Mch. 12.	Hiram Call.	American.	45	Leg broken.	Explosion of powder.	Doanville No. 1.	Athens.
Mch. 12.	Dallas Andrews.	American.	27	Hands and face burned.	Mine cars.	Pittsburg.	Meigs.
Mch. 14.	Wm. Hughes.	Welsh.	24	Leg injured.	Mine cars.	Belmont.	Columbiana.
Mch. 14.	D. E. Ervin.	American.	35	Leg broken.	Fall of roof.	Jones No. 3.	Jackson.
Mch. 15.	Tom Nicastri.	Italian.	24	Leg broken.	Fall of stone.	Lisbon.	Columbiana.
Mch. 17.	John Bolandy.	Hungarian.	23	Leg broken.	Fall of stone.	Gaylord.	Belmont.

SERIOUS ACCIDENTS—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
Feb. 17	A. Everett	American	21	Hips injured.	Fall of rock.	Elm Run No. 4	Stark.
Feb. 17	Edward Coleman	American	27	Ankle broken.	Fall of draw-slate.	Mink Run	Athens
Feb. 19	Edward Francis	Welsh	72	Collar bone broken.	Fall of slate.	Fairfield	Columbiana.
Feb. 19	Paulk Boiles	American	35	Seriously injured.	Fall of rock.	Athens	Tuscarawas.
Feb. 20	Wm. Williams	American	28	Hips injured.	Mine cover by mine cars.	Pipe Creek	Belmont.
Feb. 20	Ross	American	25	Torn broken.	Run over by mine cars.	Gaylord	Belmont.
Feb. 20	Edward L. King	American	21	Neck and back injured.	Caught between mine car and horse.	New Pittsburg No. 6	Hocking.
Feb. 21	Frank Thibault	Swiss	16	Foot injured.	Miner's mine cars.	Somerdale	Tuscarawas.
Feb. 23	Porter Lohrly	American	21	Foot injured.	Spitching mine cars.	New Pittsburg No. 3	Hocking.
Feb. 26	Elmer Grindle	American	18	Back and leg broken.	Fall of coal.	Lost Run	Hocking.
Feb. 26	Robert Ramage	American	65	Leg broken.	Fall of stone and slate.	No. 13	Stark.
Feb. 28	E. J. Maffatt	American	36	Leg broken.	Caught between car bumpers.	Buckeye No. 5	Perry.
Feb. 30	Edna Maffatt	American	19	Leg broken.	Caught by haulage rope.	Old Orchard	Columbiana.
Feb. 30	Robert Featheringham	American	20	Leg broken.	Fall of slate.	No. 3	Cornucopy
Feb. 31	Wm. Davis	American	26	Hips injured.	Caught between mine cars.	Enterprise	Stark.
Feb. 31	Steve Yokob	Slav	23	Hand injured.	Caught in sprocket wheel.	Ida	Jackson.
Feb. 31	Zethro Barber	American	23	Hip bruised.	Fall of slate.	New Pittsburg No. 6	Hocking.
April 2	Thomas Donahue	American	32	Leg broken.	Mine car.	Raccoon Valley	Union.
April 7	Wm. Tedball	American	52	Collar bone broken.	Coal from a flying shot.	Keynote No. 1	Perry.
April 8	August Goring	German	68	Leg broken.	Fall of draw-slate.	No. 20	Perry.
April 9	Sylvester Clark	American	50	Three ribs broken and ankle injured.	Fall of slate.	Milton No. 3	Jackson.
April 10	Wm. Austin	American	22	Foot and leg injured.	Fall of draw-slate.	Franklin No. 1	Coshocton.
April 11	Thomas Jones	Welsh	55	Chest and shoulder injured.	Fall of coal.	Syracuse Shaft	Meigs.
April 11	Richard Lanning	American	32	Face injured.	Fall of coal.	No. 7	Hocking.
April 11	Robert Kennison	English	22	Seriously injured.	Fall of bone coal.	Claron	Union.
April 13	John Sweeney	Irish	43	Leg broken.	Riding on mine car.	Strabley	Columbiana.
April 14	Henry Hornsbrough	American	26	Foot injured.	By motor.	Crested No. 3	Belmont.
April 14	John Monet	German	26	Finger cut off.	Caught in wheel of car.	No. 8	Athens.
April 15	Peter Bridgely	Welsh	48	Back injured.	Fall of draw-slate.	Elm Rock	Athens.
April 17	J. Hitchfield	American	29	Leg broken.	Fall of roof.	Kearl Ridge	Tumbull.
April 17	Chas. Finlay	American	25	Seriously burned.	Explosion of powder smoke.	Huff's Run No. 1	Tuscarawas.
April 17	Wm. Speis	American	28	Seriously burned.	Explosion of powder smoke.	Huff's Run No. 1	Tuscarawas.
April 17	Earl Shies	American	23	Seriously burned.	Explosion of powder smoke.	Huff's Run No. 1	Tuscarawas.
April 17	George Goldburn	American	30	Arm broken.	Fall of slate.	Ideal	Guernsey.
April 18	Warren Barnes	American	19	Leg cut off.	Run over by motor.	No. 252	Athens.
April 22	Wm. Eller	American	21	Arm broken.	Riding on tail chain.	Wainwright No. 5	Tuscarawas.
April 24	John Chipko	Slav	19	Leg broken.	Fall of slate.	U. S. No. 9	Jefferson.
April 24	John Forbes	Irish	26	Ankle injured.	Stepped on by horse.	Kings	Guernsey.
April 26	Arthur Shaw	American	28	Foot injured.	Fall of coal.	Morgan Run No. 3	Coshocton.
April 28	Mathias Brandt	American	26	Hips injured.	Fall of coal.	Harford	Guernsey.
May 1	A. Talabacki	Slav	26	Five ribs broken.	Falling down shaft.	Zerte	Jefferson.

May 2	Dennis Brown	American	30	Foot injured	Caught in mining machine chain	Keystone No. 2	Perry.
May 4	Myrt Doran	Irish	52	Foot crushed	Fall of coal	No. 283	Perry.
May 4	George Long	American	24	Back and hip sprained	Fall of slate	Keystone No. 2	Belmont.
May 5	John Yokoyama	Slav	36	Seriously injured	Fall of stone	Wheeling Creek	Tuscarawas.
May 6	Roy Hill	American	19	Hips badly injured	Riding between mine cars	Mory Ridge	Athens.
May 7	Wm. C. Cox	English	19	Leg broken	Riding on mine car	No. 286	Athens.
May 7	Joe Tabish	Slav	19	Leg broken	Fall of coal	No. 10 X	Perry.
May 8	Thomas Dolan	Irish	65	Two fingers taken off	Wheels of mining car running over same	No. 37	Columbiana.
May 9	Wm. Nible	American	35	Hips injured	Fall of slate	Negley	Hocking.
May 12	Robert Sharp	Welsh	56	Leg broken	Fall of slate	New Pittsburg No. 6	Hocking.
May 16	Oliver Hawes	American	47	Foot crushed necessitating amputation	Fall of slate	Imperial	Guernsey
May 16	Clarence Taylor	American	35	Foot crushed and shoulder bruised	Fall of slate	Milton No. 3	Jackson.
May 21	Dennis Cotton	French	42	Seriously injured	Fall of draw-slate	Edgar No. 2	Jefferson.
May 27	Wm. Bradon	American	27	Hands burned	Fall of coal	Pioneer No. 2	Guernsey.
May 29	John Perkins	American	37	Arm and head injured	By gas	Superior No. 9	Jackson.
May 29	Jno. Frankhouser	German	41	Leg broken in two places	Fall of stone	Eureka	Stark.
May 30	Jesse Shear	American	16	Seriously scalded	Fall of scapstone	West Goshen	Tuscarawas.
May 3	Clide Zoag	American	20	Seriously injured	Falling in front of a blow-off pipe	No. 8	Stark.
June 2	Chas. Carpenter	American	18	Leg broken	Squeezed between mine car and rib	Central Valley	Tuscarawas.
June 2	Henry Alaway	American	42	Hips injured	Fall of coal	No. 9	Perry.
June 3	Clem Slay	American	21	Leg broken	Fall of slate	Old Orchard	Guernsey.
June 5	Ben Yhouse	Slav	33	Leg broken	Fall of slate	Barton	Belmont.
June 5	Wm. Kovatch	Slav	34	Three ribs broken	Fall of slate	Barton	Belmont.
June 6	Pat Lydon	American	24	Knee injured	Caught between mine car and rib	Adena	Harrison.
June 8	J. B. Strichlen	American	50	Leg fractured	Fall of slate	Superior No. 1	Jackson.
June 9	Joe Osborne	Hungarian	45	Arm injured	Fall of stone	Adena	Harrison.
June 9	James Miller	Scotch	16	Leg broken	Mine car	No. 9	Perry.
June 10	Warren Peters	American	30	Leg broken	Machine bar	Ideal	Guernsey.
June 10	John Dull	Hungarian	30	Leg broken	By a derailed car	Connor No. 1	Jefferson.
June 13	Fred Slater	African	25	Seriously crushed	Caught between mine car and rib	No. 256	Athens.
June 15	Hayles Males	American	37	Ankle crushed	Run over by mine car	No. 201	Athens.
June 16	Wm. Williams	American	22	Leg broken	Caught between mine cars	No. 10	Athens.
June 17	C. Caspolin	Slav	29	Shoulder and leg injured	Caught on a post	Hartford	Guernsey.
June 18	Frank Early	Welsh	46	Shoulder and hips injured	Fall of roof	Beaver Dam No. 1	Tuscarawas.
June 20	Phil Scronce	American	34	Leg broken	Fall of coal	Kings	Guernsey.
June 22	Wm. Sutton	American	20	Leg broken	Motor jumping the track	No. 201	Athens.
June 25	Van Martin	American	55	Finger cut off	By placing coal on car	Adena	Harrison.
June 29	Arch Jones	English	17	Hips injured	Fall of slate	Fulhart No. 1	Jackson.
June 29	James Terrill	American	40	Ribs broken	Fall of coal	Johns No. 2	Hocking.
June 30	James Symes	American	21	Hip and knee injured	Fall of slate	Peacock	Muskingum.
June 30	Augustus Berray	American	33	Leg crushed necessitating amputation	Fall of coal	Old Orchard	Guernsey.
July 1	Jos. Kalaay	Slav	17	Collar bone broken	Caught in a mining machine	No. 266	Athens.
July 6	B. Halterman	German	21	Arm broken and ankle sprained	Fall of slate	Dillon No. 2	Jefferson.
July 8	I. J. Brown	American	26	Seriously injured	Caught by mine car	No. 252	Athens.
July 8	Garfield Fowler	American	18	Foot injured	Falling under loaded mine car	Walhounding No. 3	Guernsey.
July 8	James Kerr	American	53	Leg broken	Mine cars	New Pittsburg No. 7	Hocking.
July 10	Ami Stephenson	American	26	Seriously injured	Fall of coal	New Pittsburg No. 4	Athens.
					By railway cars		

SERIOUS ACCIDENTS—Continued.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
July 11.	John Cox.	English.	53	Arm broken.	Coming in contact with trolley line.	No. 23.	Athens.
July 12.	Mike Greese.	Slave.	40	Seriously injured.	Fall of slate.	Walbound.	Guernsey.
July 15.	Wm. Williams.	American.	23	Spine injured.	Fall of slate.	Luhrig No. 1.	Athens.
July 16.	Jno. Delcamp.	Scott.	20	Head injured.	Falling in front of mine cars.	Perry.	Perry.
July 17.	John Fields.	American.	26	Collar bone broken.	Fall of coal.	Cob.	Lawrence.
July 18.	Walter Guicker.	American.	17	Spine and hip injured.	Falling in front of mine car.	Luhrig No. 2.	Athens.
July 19.	Matt Dwyer.	English.	32	Back injured.	Fall of slate.	Superior No. 2.	Jackson.
July 20.	James Russell.	American.	45	Finger broken and head injured.	Fall of slate.	Clover Leaf.	Harrison.
July 20.	John Thomas.	American.	24	Collar bone broken.	Falling under loaded mine cars.	East Goshen No. 2.	Tuscarawas.
July 20.	Robert Brown.	American.	40	Ankle injured.	Fall of slate.	No. 1.	Stark.
July 24.	Jas. Kotapa.	Polish.	39	Thumb cut off.	Fall of stone.	Whelming Creek.	Belmont.
July 24.	Chas. Thayer.	American.	28	Finger cut off.	By mine car striking a post.	Empire No. 2.	Belmont.
July 24.	James Dunlap.	American.	29	Arm broken and back sprained.	Knocked off trestle by mule.	Huff's Run No. 2.	Carroll.
July 27.	Pearl Walton.	American.	19	Head, neck and hand cut.	Premature explosion.	Fluhst No. 3.	Jackson.
July 27.	Felix Feister.	Polish.	32	Leg broken.	Caught by mine cars.	Long Run.	Jefferson.
July 29.	F. L. Robertson.	American.	62	Thumb cut.	While posting room.	O. & W. Ya.	Belmont.
July 30.	John Protiva.	Bohemian.	42	Back and hips injured.	Fall of stone.	O. & W. Ya.	Belmont.
July 30.	Mary Hopstetter.	American.	23	Seriously burned.	Mine cars.	New Pittsburgh No. 6.	Hocking.
Aug. 1.	Chas. Smith.	American.	24	Leg broken.	Explosion of powder.	Kondike.	Guernsey.
Aug. 1.	Jos. Gosta.	German.	25	Leg broken.	Fall of stone.	Wheeling Creek.	Belmont.
Aug. 2.	N. DeFella.	Italian.	35	Hand crushed.	Fall of slate.	Empire No. 2.	Belmont.
Aug. 4.	Michael Cully.	English.	35	Seriously injured.	Caught between mine car and post.	Empire No. 1.	Columbiana.
Aug. 4.	Nip Hamilton.	American.	32	Head injured.	Fall of slate.	New Shaft.	Columbiana.
Aug. 5.	W. J. Brady.	Irish.	49	Leg broken.	Fall of coal.	Leetonia.	Guernsey.
Aug. 6.	Willis Long.	American.	44	Arm broken.	Squeezed between mine cars.	Old Orchard.	Belmont.
Aug. 6.	Dandy Lewis.	Hungarian.	21	Leg broken.	Fall of soapstone.	Boggs.	Belmont.
Aug. 7.	Niek Garber.	American.	28	Knee dislocated and hand cut.	Fall of roof coal.	Gayford.	Belmont.
Aug. 8.	Alvin Knight.	American.	24	Thumb cut off.	Fall of slate.	Cisco.	Guernsey.
Aug. 11.	Geo. Stenich.	Italian.	34	Foot broken.	Caught in a frog.	Empire No. 2.	Belmont.
Aug. 13.	Clark Tracy.	American.	38	Leg broken.	Fall of soapstone.	Beech Grove.	Perry.
Aug. 13.	James Johnson.	African.	28	Jaw bone broken.	Kicked by a mule.	Boggs.	Belmont.
Aug. 15.	Austin Condliff.	American.	18	Collar bone broken.	Caught between mine car and rib.	Luhrig No. 1.	Athens.
Aug. 17.	Neel Brier.	Irish.	23	Foot crushed.	Fall of slate.	Old Orchard.	Guernsey.
Aug. 17.	W. H. Smith.	Welsh.	56	Seriously injured.	Caught by cage.	Machine.	Jackson.
Aug. 19.	John Evans.	Welsh.	55	Hip dislocated.	Fall of slate.	No. 321.	Perry.
Aug. 21.	Imacee Gracie.	Hungarian.	41	Shoulder and four ribs broken.	Riding in front of loaded mine cars.	New Pittsburgh No. 5.	Athens.
Aug. 23.	Frank Alexander.	Austrian.	38	Shoulder and four ribs broken.	Caught between mine cars.	McFayden.	Jefferson.
Aug. 24.	Wm. Wadley.	American.	17	Seriously injured.	Caught between mine cars.	Jobs No. 2.	Hocking.
Aug. 24.	Dick Towell.	African.	43	Skull fractured.	Equilibrating a shot.	Superior No. 1.	Jackson.

Aug. 26	John F. Peters	American	53	Ankle bone fractured.	Attempting to board mine car.	Foraythe	Guernsey.
Aug. 26	Andy Broke	Slav	23	Back broken.	Fall of slate.	Cisco	Guernsey.
Aug. 27	John Steelman	English	43	Leg broken.	Fall of coal.	Conesville No. 4	Coahooton.
Aug. 27	Jos. Oaklath	Slav	30	Back and foot injured.	Fall of slate.	Ideal	Guernsey.
Aug. 27	Leit Duplain	American	33	Back injured.	Fall of slate.	McGinty	Start.
Aug. 31	Wm. West	American	34	Arm broken.	Falling from railway cars.	No. 254	Athens.
Aug. 31	Henry Roche	German	15	Head and hand injured.	Fall of stone and coal.	No. 9	Start.
Sept. 1	George McCoy	American	25	Ear cut and legs bruised.	By a loaded trip.	West Goshen	Turaras.
Sept. 2	Michael Koval	Hungarian	28	Leg broken.	Caught between trapdoor and horse.	State Line No. 3	Belmont.
Sept. 5	Mat. Parshute	German	42	Both legs broken.	Fall of bone coal.	Pine Hill	Columbiana.
Sept. 8	Mat. Pfanderger	Irish	22	Seriously injured.	Fall of slate.	Superior No. 5 New	Jackson.
Sept. 9	Danid Jones	German	81	Collar bone broken.	Fall of slate.	Yondale	Perry.
Sept. 12	John Homick	Welsh	37	Leg broken.	Fall of slate.	No. 12	Perry.
Sept. 14	A. F. Chalan	Hungarian	48	Head and shoulder injured.	Fall of slate.	Crabapple No. 3	Athens.
Sept. 14	Albert Sobodinski	Polish	54	Three fingers mashed.	By blocking railway cars.	U. S. No. 9	Jefferson.
Sept. 16	Lewis Whorton	American	37	Foot broken.	Fall of slate.	Old Orchard	Guernsey.
Sept. 16	Mike Cuiner	American	16	Collar bone broken.	Falling under mine car.	Rock Run No. 3	Perry.
Sept. 16	Peter Buemi	Italian	35	Face and hands burned.	Flash blast.	Icetonia	Columbiana.
Sept. 19	John West	Italian	32	Hand broken.	Flash blast.	Letonia	Columbiana.
Sept. 19	Jack Hall	Irish	55	Three ribs and cheek bone fractured.	Struck by coal falling from cage.	Fuhart No. 3	Jackson.
Sept. 16	Charles McPhedius	American	25	Shoulder and arm injured.	Shot blowing through rib.	Morgan & Horton	Seito.
Sept. 17	Arthur Binomontl.	Italian	25	Back broken.	Fall of slate.	Fuhart No. 1	Jackson.
Sept. 18	Robert Costene	American	18	Leg broken.	Fall of coal.	West Goshen	Turaras.
Sept. 21	Earnes Barr	English	18	Finger injured.	Caught between mine car and door.	Whedding Creek No. 1	Belmont.
Sept. 21	Urvn Zeiger	American	19	Leg injured.	Run over by mine car.	Blondike	Guernsey.
Sept. 21	Joe Gurrins	Slav	22	Seriously burned.	Caught between mine car and door.	Shanesville	Turaras.
Sept. 21	Daniel Jegg	Slav	33	Seriously burned.	Explosion of gas.	La Belle	Jefferson.
Sept. 21	Nick Gurvitzca	Slav	33	Seriously burned.	Explosion of gas.	La Belle	Jefferson.
Sept. 21	Joe Dargl	Slav	35	Seriously burned.	Explosion of gas.	La Belle	Jefferson.
Sept. 21	Michael Olexi	Slav	28	Seriously burned.	Explosion of gas.	La Belle	Jefferson.
Sept. 21	Frank Dargik	Slav	28	Seriously burned.	Explosion of gas.	La Belle	Jefferson.
Sept. 23	Andy Bolas	Hungarian	60	Two ribs broken.	Fall of stone.	Crescent No. 2	Belmont.
Sept. 24	Wm. Archer	American	40	Jaw bone crushed.	Run over by mine cars.	Not's No. 3	Belmont.
Sept. 24	John Wolf	German	26	Hand broken.	Explosion of powder.	N. F. R. Co.	Rocking.
Sept. 26	S. F. McAllister	American	45	Arm broken.	Fall of slate.	Old Orchard	Guernsey.
Sept. 29	Joseph Jorgest	German	60	Leg fractured.	Fall of slate.	Magnolia	Carroll.
Oct. 2	John Magarva	American	18	Arm burned.	Inadvertent lamp cord.	New Pittsburgh No. 7	Rocking.
Oct. 3	George Johnson	American	54	Two fingers broken.	Coming in contact with post.	Superior No. 8	Jackson.
Oct. 3	Walter Innman	American	20	Hand injured.	Coupling mine cars.	New Pittsburgh No. 7	Rocking.
Oct. 5	Fred. Vermillion	American	22	Internally injured.	Fall of coal.	Clarion	Vinton.
Oct. 10	Felix Fether	Polish	82	Leg broken.	Fall of stone.	Long Run	Jefferson.
Oct. 14	John Tucker	American	55	Foot injured.	Fall of coal.	New Green	Perry.
Oct. 14	Cal Reed	American	73	Ankle bruised.	Fall of slate.	Blondike	Jefferson.
Oct. 14	Anthony Kavakoski	Polish	27	Two fingers taken off.	By mining machine.	Jefferson No. 2	Jefferson.
Oct. 16	Bert Mepe	American	30	Foot broken.	Falling in front of loaded mine car.	Ramsay No. 3	Guernsey.
Oct. 17	Thomas Prire	Welsh	35	Chest bone broken.	Riding on motor.	Kings	Belmont.
Oct. 17	John Stupock	Hungarian	29	Rib broken.	Squeezed between mine car and mule.	Gaylord	Belmont.
Oct. 18	E. Harner	American	38	Ankle broken.	Falling under mine car.	Superior No. 3	Jackson.
Oct. 26	Andy Whittas	Slav	29	Leg broken.	Fall of stone.	Franklin	Belmont.

SERIOUS ACCIDENTS—Concluded.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
Oct. 26.	Dee Hamilton.	American.	19	Foot mashed.	Fall of slate.	Black Diamond.	Belmont.
Oct. 26.	Thos. Alexander.	American.	22	Jaw bone broken.	Kicked by mule.	Superior No. 8.	Jackson.
Oct. 29.	John Winger.	American.	34	Leg injured.	By cutting machine.	Kingsford.	Guernsey.
Oct. 29.	Robert Young.	American.	33	Leg broken.	Riding on mine car.	Diamond.	Jefferson.
Oct. 30.	Alyis Mission.	German.	36	Leg broken.	Fall of slate.	Black Diamond.	Belmont.
Oct. 31.	Ed. Garthwaite.	American.	39	Three ribs broken and leg injured.	Fall of slate.	Black Diamond.	Belmont.
Oct. 31.	Eugene Vigin.	French.	50	Knee injured.	Explosion of smoke.	Big Walnut.	Columbiana.
Nov. 2.	Joseph Burr.	Hungarian.	44	Leg broken.	Explosion of smoke.	Big Walnut.	Columbiana.
Nov. 3.	Fremont Golden.	American.	36	Both legs and one arm broken.	Fall of slate.	Adena.	Harrison.
Nov. 4.	Frank Shehen.	Irish.	45	Four ribs broken.	Fall of slate.	Linton.	Columbiana.
Nov. 4.	Salvian Stephen.	Italian.	35	Park bruised.	Struck by coal from flying shot.	Cherry Valley.	Columbiana.
Nov. 7.	Thomas Cameron.	American.	16	Arm broken.	Fall of slate.	Huff's Run.	Carroll.
Nov. 7.	Bernie Jack.	American.	16	Leg broken.	Mine car.	Tom Corwin No. 1.	Jackson.
Nov. 10.	J. K. Fluhart.	American.	32	Leg broken.	Caught in wheel.	New Pittsburgh No. 1.	Hocking.
Nov. 10.	John Leitch.	Scotch.	27	Face and hands burned.	Fall of slate.	New Pittsburgh No. 3.	Hocking.
Nov. 10.	Joe Peter.	Hungarian.	30	Leg broken.	Premature explosion.	Wainwright.	Jefferson.
Nov. 11.	R. D. Jones.	American.	57	Leg broken.	Fall of slate.	Connor No. 2.	Jefferson.
Nov. 12.	Anthony Kavakoski.	Polish.	27	Hip injured.	Machine truck.	Northern No. 2.	Jefferson.
Nov. 13.	Joseph Folk.	Hungarian.	29	Hip injured.	Jumping on a loaded trip.	Beaver Dam No. 1.	Tuscarawas.

MINOR ACCIDENTS FROM NOVEMBER 15, 1902, TO NOVEMBER 15, 1903.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
1902.							
Nov. 19	Jesse Wainer.	American.	27	Leg injured.	While removing a barrel of oil.	Masillon No. 3.	Stark.
Nov. 21	Wm. Hammer.	German.	20	Foot and ankle injured.	Fall of slate.	Central No. 7.	Stark.
Nov. 24	I. Ervin.	American.	40	Slightly injured.	Fall of draw-slate.	Black Diamond.	Morgan.
Nov. 24	James Barker.	American.	17	Leg injured.	Falling in front of mine car.	Little Kate.	Guernsey.
Nov. 24	Wat Brown.	American.	31	Teeth knocked out and face injured.			
Nov. 24	Henry Evans.	Welsh.	37	Head injured.	Fall of slate.	National.	Mahoning.
Nov. 24	Chas. Whitehair.	American.	17	Head injured.	Fall of coal.	Zeina Standard.	Belmont.
Nov. 26	John Moffitt.	American.	26	Leg bruised.	Fall of slate.	No. 261.	Athens.
Nov. 28	Albert Jones.	Welsh.	30	Leg injured.	Fall of slate.	Leathernwood.	Guernsey.
Nov. 28	Stani Molecki.	Hungarian.	35	Head cut and body bruised.	Fall of coal.	No. 6.	Portage.
Dec. 4.	John Doody.	Hungarian.	28	Slightly injured.	Shot blowing through the rib.	No. 24.	Athens.
Dec. 12.	Lewis Jenkins.	American.	14	Leg injured.	Fall of roof.	New Pittsburg No. 5.	Athens.
Dec. 13.	Harry Leach.	English.	27	Foot injured.	Falling in entryway.	No. 17.	Athens.
Dec. 16.	Joseph Patton.	American.	30	Ankle injured.	Caught in a frog.	West Pittsburg.	Jefferson.
Dec. 18.	Peter Deering.	German.	18	Back injured.	Fall of slate.	Star No. 4.	Jackson.
Dec. 19.	Robert Williams.	American.	20	Back and hips injured.	Fall of bone coal.	New Pittsburg No. 4.	Athens.
Dec. 28.	Joseph Whym.	Hungarian.	47	End of finger taken off.	Fall of soapstone.	Franklin.	Belmont.
Dec. 29.	Louis Setingary.	Italian.	40	Foot injured.	By motor.	Long Run.	Jefferson.
Dec. 30.	Lafayette Turvey.	American.	42	Foot injured.	Fall of stone.	Woodland.	Stark.
Dec. 30.	Hiram Markel.	English.	25	Finger crushed.	Run over by mine cars.	Klondike.	Guernsey.
Dec. 30.	Wm. Pritchard.	English.	24	Hips injured.	Caught between spreader and chain.	Somers No. 1.	Athens.
Dec. 30.	Wm. Crookston, Jr.	American.	22	Right leg injured.	Caught between door and mine car.	No. 267.	Athens.
					Falling under mine car.	No. 16.	Stark.
1903.							
Jan. 3.	J. W. Powell.	American.	32	Breast and leg bruised.	Fall of coal.	New Pittsburg No. 3.	Hocking.
Jan. 6.	Mark Sheldon.	American.	25	Slightly injured.	Fall of roof.	New Pittsburg No. 1.	Hocking.
Jan. 6.	Carmen Benedict.	Italian.	26	Back and leg injured.	Fall of coal.	Adena.	Harrison.
Jan. 6.	Michael Lucas.	Slav.	17	Foot injured.	By mining machine truck.	Forsythe.	Guernsey.
Jan. 8.	Dominick Skere.	Italian.	40	Body bruised.	Fall of soapstone.	Connor No. 1.	Jefferson.
Jan. 9.	Charles Koon.	American.	22	Slightly injured.	Horse falling on him.	New Pittsburg No. 7.	Hocking.
Jan. 10.	Henry Flowers.	American.	28	Body bruised.	Caught between mule and rib.	Gaylord.	Belmont.
Jan. 13.	Matt Spence.	American.	28	Hips bruised.	Thrown against mine car.	Northwest.	Perry.
Jan. 15.	John Ash.	Hungarian.	19	Leg and shoulder injured.	Squeezed between mine cars.	McFayden.	Jefferson.
Jan. 17.	Rees Jones.	Welsh.	27	Back bruised.	Fall of stone.	No. 3.	Stark.
Jan. 17.	Edward Davis.	Welsh.	55	Leg injured.	Fall of slate.	No. 3.	Stark.
Jan. 21.	Lon Burns.	American.	23	Ankle injured.	Caught between mine cars.	Fluhart No. 1.	Jackson.
Jan. 21.	Edley Scott.	American.	17	Slightly injured.	Caught by a mine car.	Irish Hollow No. 1.	Lawrence.
Jan. 22.	Ernest Thompson.	American.	23	Slightly injured.	Caught between mine car and mule.	New Pittsburg No. 7.	Hocking.
Jan. 23.	Henry Luke.	American.	17	Hand injured.	T-rail falling on it.	Black Diamond.	Belmont.
Jan. 24.	Harry Tipton.	American.	23	Foot injured.	Caught between mine car and bumpers.	Kelley.	Lawrence.
Jan. 25.	Harvey Pearce.	American.	22	Leg injured.	Falling in front of mine cars.	Superior No. 2.	Jackson.

MINOR ACCIDENTS—Concluded.

Date.	Name.	Nationality.	Age.	Character of Injury.	Cause of Accident.	Name of Mine.	County.
Jan. 26.	Pat. Grigsby.	American.	23	Foot injured.	Caught between mine car and timber.	Northwest.	Perry.
Jan. 28.	Harlin Martin.	American.	24	Back injured.	Fall of draw-slate.	Flahart No. 1.	Jackson.
Jan. 29.	Field Willis.	American.	28	Foot injured.	Caught between car bumper and coal.	Flahart No. 1.	Jackson.
Jan. 30.	Edward Dehl.	American.	29	Face and neck burned.	By gas.	Superior No. 9.	Jackson.
Jan. 30.	W. D. Johns.	Welsh.	56	Foot injured.	Fall of coal.	Hutson No. 6.	Portage.
Feb. 3.	Edward Harris.	English.	23	Foot injured.	Fall of slate.	Hutson No. 6.	Portage.
Feb. 3.	Raymond Dixon.	English.	23	Finger mashed.	Mine car jumping the track.	Superior No. 8.	Jackson.
Feb. 9.	Chas. Reamer.	American.	30	Slightly injured.	Fall of slate.	Whitehead.	Jackson.
Feb. 11.	Herbert Mann.	American.	19	Hips injured.	Fall of draw-slate.	Tibbals.	Jackson.
Feb. 13.	John Edwards.	Welsh.	44	Leg injured.	Force falling on him.	Rock Run No. 3.	Perry.
Feb. 14.	George Wilson.	American.	26	Wrist dislocated.	Caught between mine car and mule.	Imperial.	Guernsey.
Feb. 16.	John Williams.	Welsh.	18	Hand injured.	Caught between mine car and motor.	Jobs No. 2.	Hocking.
Feb. 17.	Harry Ballard.	American.	18	Hand injured.	Running nail in it.	McGinty.	Stark.
Feb. 17.	Jos. Dupeplan.	American.	28	Foot injured.	Run over by mine cars.	Franklin.	Belmont.
Feb. 17.	W. Ryers.	American.	30	Spine injured.	Slipping and falling on rail.	State Line No. 3.	Columbiana.
Feb. 18.	Hilton Jones.	American.	51	Leg injured.	Fall of coal.	Deerfield.	Portage.
Feb. 19.	James Watson.	Scotch.	46	Leg injured.	Fall of coal.	Little Kate.	Guernsey.
Feb. 23.	Henry Dyer.	American.	16	Knee injured.	Mine car jumping the track.	Hulbert.	Athens.
Feb. 24.	Ray Best.	American.	40	Slightly injured.	Caught under mine car.	No. 10.	Muskingum.
Feb. 25.	E. W. Hughes.	American.	27	Foot injured.	Fall of slate.	McFayden.	Jefferson.
Feb. 25.	Wm. Sherman.	German.	35	Head injured.	Fall of coal.	Kings.	Guernsey.
Feb. 25.	Wm. Foster.	American.	22	Slightly injured.	Squeezed between mine car and post.	Trail Run.	Guernsey.
Feb. 25.	Wm. Lee.	American.	21	Head injured.	Caught between mine cars.	Boggs.	Belmont.
Feb. 25.	Smith Cunningham.	American.	26	Head injured.	Fall of soapstone.	Pine Hill.	Columbiana.
Feb. 25.	Fred Estel.	English.	22	Back injured.	Caught between mine car and rib.	Lawrence Mill.	Lawrence.
Feb. 25.	George Iva.	Scotch.	52	Ankle and knee sprained.	Fall of slate and stone.	No. 254.	Athens.
Feb. 25.	Geo. Carter, Jr.	American.	49	Back injured.	Fall of top coal.	No. 3.	Stark.
Feb. 25.	Cyrus Singer.	American.	31	Hip injured.	By lifting stone from car.	Barlow.	Belmont.
Feb. 25.	Steve Duehl.	Slav.	24	Face and hands burned.	Explosion of powder.	Trail Run.	Guernsey.
April 3.	John Williams.	Welsh.	22	Foot injured.	Run over by mine cars.	Laughlin.	Jefferson.
April 6.	James Young.	American.	35	Foot and leg injured.	Coming in contact with cage.	No. 252.	Athens.
April 9.	Wm. Hamilton.	English.	26	Thumb injured.	Mine cars.	Indian Camp.	Guernsey.
April 13.	Wm. Roachrig.	American.	33	Back injured.	Jumping from mine cars.	Ranfield.	Jefferson.
April 21.	Fred. Milligan.	American.	38	Finger injured.	Fall of draw-slate.	Cherry Valley.	Columbiana.
April 21.	W. A. Davis.	American.	35	Face injured.	Fall of slate.	Sherradville No. 6.	Carroll.
April 23.	Harm Merman.	American.	38	Foot injured.	Run over by mine cars.	Pocock No. 3.	Stark.
April 24.	John Bently.	American.	54	Slightly injured.	Fall of coal.	No. 203.	Athens.
May 4.	Jacob Ball.	English.	30	End of thumb taken off.	Caught between bumpers of mine car.	Mingled No. 2.	Stark.
May 8.	Worley Brown.	English.	33	Slightly injured.	Mine car jumping the track.	Deerfield No. 4.	Perry.
May 28.	John J. Williams.	Welsh.	18	Foot injured.	Caught between mine cars.	Mink Run.	Portage.
June 4.	Peter Pommel.	American.	28	Slightly injured.	Fall of draw-slate.	New Pittsburgh No. 1.	Hocking.
June 4.	Lawrence Hault.	American.	22	Hand injured.	Coming in contact with a rope.		Hocking.

June 9	Forest Chilton	American	23	Hand injured	Fall of coal	Kings	Guernsey.
June 11	Ezra Finley	American	35	Hips injured	Fall of coal	Hartford	Guernsey.
June 16	George Ware	American	48	Hands and face burned	By gas	Superior No. 9	Jackson.
June 19	Wm. Bishop	American	45	Ankle and foot injured	Fall of draw-slate	Superior No. 9	Jackson.
June 30	Joseph Harris	English	28	Toe injured	Fall of draw-slate	Hulton No. 6	Portage.
July 2	Steve Gaston	Hungarian	23	Head injured	Riding on loaded mine car	Roby	Harrison.
July 6	Lewis Bistick	Polish	27	Foot injured	Shot blowing through the rib	O. & W. Va.	Belmont.
July 8	Jacob Duke	American	24	Ankle sprained	Run over by mine car	Empire No. 2	Belmont.
July 8	Lawrence Smith	American	24	Finger crushed	Mine car jumping the track	New Pittsburgh No. 1	Hocking.
July 22	Homor Schraeder	American	20	Thigh injured	Caught between mine cars	Dulon No. 2	Jefferson.
July 25	Henry Barstow	American	18	Foot injured	By mine cars	New Pittsburgh No. 7	Hocking.
July 25	Andy Kegelmeyer	German	42	Foot injured	Fall of coal	Leotonia	Columbiana.
Aug. 1	Garner Baker	African	16	Bobby bruised	Fall of slate	No. 268	Perry.
Aug. 5	Frank Robertis	Welsh	17	Arm bruised	Caught by mine car	No. 253	Athens.
Aug. 18	George Smathers	American	29	Leg injured	By mine car	New Pittsburgh No. 4	Athens.
Aug. 22	George Thompson	Slav	23	Foot injured	Fall of coal	Kings	Guernsey.
Aug. 25	Bert Fisher	Scottish	51	Toe injured	Fall of draw-slate	Hulton No. 6	Portage.
Aug. 28	John Carlin	American	19	Foot injured	By truck	New Pittsburgh No. 1	Hocking.
Aug. 28	Henry Probits	German	58	Head cut and chest injured	Falling from hoppers	Carbondale No. 3	Athens.
Sept. 1	Lloyd McCorkle	American	15	Back injured	Fall of stone and coal	No. 9	Stark.
Sept. 8	John Ramage	American	32	Slightly injured	Caught between mine car and mine door	Zerbe	Jefferson.
Sept. 16	Thos. O'Harrow	Scottish	48	Hip bruised	By using hatchet	Laughlin	Jefferson.
Sept. 16	Dave Gossman	American	45	Two fingers crushed	Fall of slate	Old Orchard	Guernsey.
Sept. 19	Lewis Lincoln	German	45	Hand injured	By blocking mine car	Carbondale No. 3	Athens.
Sept. 21	John Wrschinski	Polish	26	Back and hip injured	Fall of coal	Kelley	Lawrence.
Sept. 21	Isaac McCune	Polish	46	Head slightly bruised	Fall of coal and slate	Edgar No. 2	Jefferson.
Sept. 28	H. K. Baird	American	26	Slightly injured	Caught between horse and car	Adena No. 1	Harrison.
Sept. 28	John Lantzer	German	39	Fingers injured	By mining machine	Kimberly	Athens.
Sept. 29	Leonard Long	German	40	Foot injured	By a gravel car	No. 13	Stark.
Sept. 30	Joe Keaton	American	22	Foot run over	By mine car	Brookfield	Stark.
Oct. 1	John Lynch	American	21	Knee injured	Mine car jumping the track	Werners	Belmont.
Oct. 2	Samuel Miles	American	24	Forehead injured	Fall of slate	Jobs No. 2	Hocking.
Oct. 9	Edward Baker	American	50	Hands and face burned	By coming in contact with gas	Adena No. 1	Harrison.
Oct. 16	Joe Bushkoosh	American	24	Back sprained	Caught between mine cars	Klondike	Guernsey.
Oct. 17	Joe Brown	Hungarian	22	Ankle sprained	Mine cars jumping the track	Keystone No. 3	Perry.
Oct. 21	Ever Haney	Welsh	45	Finger broken	Bending a T-rail	Adena No. 1	Harrison.
Oct. 27	Clyde Campbell	American	51	Ankle injured	Fall of coal and slate	Superior No. 8	Jackson.
Oct. 29	Jacob Whiston	English	28	Foot injured	Fall of coal	Black Diamond	Belmont.
Oct. 30	August Bennett	French	30	Foot injured	Caught between mine car and mule	Deerfield No. 4	Portage.
Oct. 30	Harvey Beck	French	40	Foot injured	Fall of coal	Flushing	Belmont.
Oct. 30	Alexander Watts	American	36	Leg injured	Fall of coal	No. 17	Stark.
Oct. 31	Percy Tellow	English	30	Foot bruised	Unloading oil barrels	Adena No. 1	Harrison.
Oct. 31	Andrew Murr	English	55	Slightly injured	Caught between mine car and rib	No. 17	Stark.
Oct. 31	Leo Virgin	Scotch	38	Slightly injured	By a smoke explosion	Big Walnut	Columbiana.
Oct. 31	Frank Byler	French	40	Slightly injured	By a smoke explosion	Big Walnut	Columbiana.
Oct. 31	Julius Tessame	Italian	25	Slightly injured	By a smoke explosion	Big Walnut	Columbiana.
Oct. 31	Victor Givard	French	40	Slightly injured	By a smoke explosion	Big Walnut	Columbiana.
Oct. 31	George Winkow	Italian	42	Slightly injured	By a smoke explosion	Big Walnut	Columbiana.
Nov. 2	Frank Grathieck	Polish	42	Shoulder injured	Fall of soapstone	Adena No. 1	Harrison.
Nov. 5	Miles Ralph	American	25	Foot crushed	Mine car jumping the track	Laura	Noble.

1

INSPECTORS AND DISTRICTS INTO WHICH THE STATE IS DIVIDED.

ELMER G. BIDDISON,*Chief Inspector of Mines, Columbus, Ohio.*

FIRST DISTRICT.

Composed of the counties of Hocking, Jackson, Scioto and Vinton.

R. M. MASON, *Inspector*,
Logan, Hocking County, Ohio.

On August 15, 1903, Ed. S. Smith, of Logan, Ohio, succeeded R. M. Mason and assumed charge of the above District.

SECOND DISTRICT.

Composed of the counties of Athens, Gallia, Lawrence, Meigs and Washington.

D. H. WILLIAMS, *Inspector*,
Glouster, Athens County, Ohio.

THIRD DISTRICT.

Composed of the counties of Muskingum, Morgan, Noble and Perry.

D. B. WILSON, *Inspector*,
Corning, Perry County, Ohio.

One June 9, 1903, John Winefordner, of Duncan's Falls, Ohio, superseded D. B. Wilson, Corning, Ohio, and assumed charge of the above District.

FOURTH DISTRICT.

Composed of the counties of Monroe, Belmont, Harrison and Jefferson.

THOMAS MCGOUGH, *Inspector*,
Bridgeport, Belmont County, Ohio.

FIFTH DISTRICT.

Composed of the counties of Guernsey, Coshocton and Tuscarawas.

W. H. TURNER, *Inspector*,
Cambridge, Guernsey County, Ohio.

SIXTH DISTRICT.

Composed of the counties of Carroll, Columbiana, Mahoning, Trumbull and Portage.

JAMES P. DAVIS, *Inspector*,
Dell Roy, Carroll County, Ohio.

SEVENTH DISTRICT.

Composed of the counties of Medina, Stark, Summit, Wayne and Holmes.

W. H. MILLER, *Inspector*,
Massillon, Stark County, Ohio.

FIRST MINING DISTRICT.

ED. S. SMITH, Inspector, Logan, Ohio.

HOCKING COUNTY.

No. of miners employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
160	42	Drift.....	Fan.....	6	5 to 7	Double.....	Rope.....	Hocking Valley.
175	51	Drift.....	Fan.....	6	6	Double.....	Rope.....	Hocking Valley
270	25	Drift.....	Fan.....	6	5 to 7	Double.....	Motor.....	Hocking Valley
69	28	Drift.....	Fan.....	6	6 to 8	Double.....	Motor.....	Hocking Valley.
90	26	Drift.....	Fan.....	6	4 to 6	Double.....	Rope.....	Hocking Valley.
219	69	Drift.....	Fan.....	6	6	Double.....	Rope and Motor.	Hocking Valley.
263	40	Drift.....	Fan.....	6	6	Double.....	Rope and Motor.	Hocking Valley.
440	70	Drift.....	Fan.....	6	4 to 7	Double.....	Rope.....	Hocking Valley.
35	15	Drift.....	Fan.....	6	5 to 7	Double.....	Rope.....	Hocking Valley.
114	73	Drift.....	Fan.....	6	6	Double.....	Rope.....	Hocking Valley.
48	16	Drift.....	Fire Basket.	6	6 to 8	Double.....	Motor.....	Hocking Valley.
24	8	Drift.....	Furnace.....	6	7	Double.....	Mule.....	Hocking Valley.
28	8	Drift.....	Furnace.....	6	7	Double.....	Mule.....	Hocking Valley.
38	10	Drift.....	Furnace.....	6	7	Double.....	Rope.....	Hocking Valley.
24	2	Drift.....	Fire Basket.	6	5 to 7	Single.....	Mule.....	Hocking Valley.
17	3	Drift.....	Fire Basket.	6	6	Single.....	Mule.....	Hocking Valley.
24	4	Drift.....	Natural.....	6	6	Pillars & Stumps	Mule.....	Hocking Valley.
05	44	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	Ohio So. & C.H. & D.
23	54	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	Ohio So. & C.H. & D.
60	43	Shaft.....	Fan.....	2	4½	Double.....	Mule.....	B. & O. S. W.
29	41	Shaft.....	Fan.....	2	3 to 4	Double.....	Mule.....	C. H. & D.
25	13	Drift.....	Fan.....	2	3½	Double.....	Mule.....	C. H. & D.
33	19	Slope.....	Fan.....	2	4	Double.....	Mule.....	C. H. & D. & O. S.
10	41	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	Ohio Southern.
90	115	Shaft.....	Fan.....	2	3½	Single.....	Mule.....	B. & O. & C.H. & D.
90	50	Shaft.....	Fan.....	2	3½	Single.....	Mule.....	C. H. & D.
70	32	Drift.....	Fan.....	2	3½	Single.....	Mule.....	C. H. & D.
32	13	Drift.....	Furnace.....	2	4	Single.....	Mule.....	Ohio Southern.
65	20	Shaft.....	Fan.....	2	3½	Single.....	Motor.....	Ohio Southern.
90	35	Shaft.....	Fan.....	2	3½	Single.....	Mule.....	Ohio Southern.
29	54	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	B. & O.S.W. & H.V.
76	40	Shaft.....	Fan.....	2	3½	Double.....	Rope.....	B. & O.S.W. & H.V.
45	14	Shaft.....	Fan.....	2	2 to 4	Double.....	Mule.....	B. & O. S. W.
20	12	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	B. & O. S. W.
38	16	Shaft.....	Fan.....	2	4	Double.....	Mule.....	B. O. S. W.
28	96	Shaft.....	Fan.....	2	2 to 4	Double.....	Motor.....	O. S. & C. H. & D.
26	21	Slope.....	Fan.....	2	3½	Single.....	Rope.....	Ohio Southern.
22	23	Slope.....	Fan.....	2	3½	Single.....	Rope.....	O. S. & C. H. & D.
25	7	Slope.....	Fan.....	2	3	Single.....	Mule.....	Ohio Southern.
34	34	Shaft.....	Fan.....	2	3	Single.....	Mule.....	Ohio Southern.
8	8	Drift.....	Furnace.....	2	2 to 3	Single.....	Mule.....	Ohio Southern.
23	23	Shaft.....	Fan.....	2	3½	Single.....	Mule.....	O. S. & C. H. & D.
21	21	Slope.....	Fan.....	2	3 to 4	Single.....	Rope.....	O. S. & C. H. & D.
31	31	Shaft.....	Fan.....	2	3 to 4	Double.....	Mule.....	C. H. & D.
37	37	Shaft.....	Fan.....	2	3½	Double.....	Motor.....	O. S. & C. H. & D.
15	15	Shaft.....	Fan.....	2	2 to 3	Double.....	Mule.....	B. O. S. W.
25	25	Shaft.....	Fan.....	2	2 to 5	Double.....	Mule.....	C. H. & D.
16	16	Drift.....	Furnace.....	2	2 to 3½	Single.....	Mule.....	C. H. & D.
21	21	Shaft.....	Fan.....	2	2 to 3	Double.....	Mule.....	C. H. & D.
9	9	Drift.....	Furnace.....	2	2 to 3	Single.....	Mule.....	C. H. & D.
9	9	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	Ohio Southern.
7	7	Shaft.....	Fan.....	2	3	Single.....	Mule.....	O. S. & C. H. & D.
13	13	Shaft.....	Fan.....	2	2 to 3½	Single.....	Mule.....	Ohio Southern.
4	4	Slope.....	Furnace.....	2	2 to 3½	Single.....	Mule.....	Ohio Southern.

FIRST MINING DISTRICT—Concluded.

JACKSON COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Tom Rhoades.....	Coalton Coal Co., Coalton, O.....	Norris Cameron, Coalton, O.....
Milton No. 4.....	Dayton Coal & Iron Co., Wellston O.....	W. B. Montgomery, Wellston, O.....
Price.....	W. A. Gosline & Son, Toledo, O.....	J. C. Hurd, Jr., Jackson, O.....
Davis of Oak Hill.....	Thomas-Davis Coal Co., Oak Hill, O.....	Evan Davis, Oak Hill, O.....
Globe No. 3.....	Globe Iron Co., Jackson, O.....	J. E. Jones, Jackson, O.....
Star No. 4.....	Star Furnace Coal Co., Jackson, O.....	Chas. Brown, Jackson, O.....
Enterprise.....	Enterprise Coal Co., Jackson, O.....	John E. Jones, Jackson, O.....
Crescent.....	Crescent Coal Co., Jackson, O.....	John S. Jones, Jackson, O.....
McKitterick.....	McKitterick Coal Co., Jackson, O.....	J. J. Morgan, Jackson, O.....
Armstrong.....	Armstrong Coal Co., Jackson, O.....	J. M. Armstrong, Jackson, O.....
McKinley.....	McKinley Coal Co., Jackson, O.....	George Cundiff, McArthur, O.....
Iron Valley Coal Co.,.....	I. V. Brown, Jackson, O.....	W. H. Sloan, Jackson, O.....
Domestic.....	Domestic Coal Co., Jackson, O.....	Peter Gallagher, Wellston, O.....
McGhee.....	McGhee Coal Co., Jackson, O.....	Patrick Varley, Wellston, O.....
Ohio.....	Ohio Coal Co., Jackson, O.....	Geo. Wheldon, Jackson, O.....
Southern Ohio.....	Bucholts & Sylvester, Wellston, O.....	Dr. J. C. Sylvester, Wellston, O.....
Oak Hill.....	Oak Hill Fire Brick Co., Oak Hill, O.....	J. J. Thomas, Oak Hill, O.....
Symmes Creek.....	Symmes Creek Coal Co., Rempel, O.....	Emmet Dungan, Jackson, O.....
Ridgeland.....	Ridgeland Coal & Ry. Co., Ridgeland, O.....	T. W. Jones, Gallipolis, O.....
Tibbals.....	W. T. Tibbals & Co., Jackson, O.....	Chas. E. Tibbals, Jackson, O.....
Washington.....	Washington Coal Co., Eiforts, O.....	M. E. Dickers, Eiforts, O.....
Bats Nest.....	Pritchard & Pool, Glen Roy, O.....	S. R. Poole, Glen Roy, O.....

SCIOTO COUNTY.

Irish Hollow.....	Hanging Rock Iron Co., Hanging Rock, O.....	L. W. Doty, Gervais, O.....
Eifort No. 1.....	Eifort Coal Co., Eifort, O.....	Wm. Horton, Eifort, O.....
Eifort No. 2.....	Eifort Coal Co., Eifort, O.....	Wm. Horton, Eifort, O.....

VINTON COUNTY.

Star No. 2.....	Star Coal Co., Hawks, O.....	E. W. Keck, Hawks, O.....
Ingham.....	Morehead Bros. & Jaynes, Mineral, O.....	O. C. Morehead Hamden Junction, O.....
Minerton.....	J. L. Lawler, Minerton, O.....	J. L. Lawler, Minerton, O.....
Oreton.....	Vinton Co. Coal & Mining Co., Dayton, O.....	Wm. Ellis, Oreton, O.....
Elk Fork.....	Elk Fork Coal Co., McArthur, O.....	W. P. Porter, Elk Fork, O.....
Rock.....	Cornelia Mining Co., Wellston, O.....	Carlus Goddard, Wellston, O.....
Cornelia No. 2.....	Conelia Mining Co., Wellston, O.....	Carlus Goddard, Wellston, O.....

FIRST MINING DISTRICT—Concluded.

JACKSON COUNTY—Concluded.

No. of miners employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
4	2	Drift.....	Natural.....	2	2 to 3	Single.....	Mule.....	C. H. & D.
80	37	Shaft.....	Fan.....	2	2½ to 4	Double.....	Mule.....	C. H. & D.
25	9	Drift.....	Furnace.....	2	2 to 3½	Single.....	Mule.....	Ohio Southern.
79	31	Shaft.....	Fan.....	1	2 to 3½	Double.....	Mule.....	Ohio Southern.
7	2	Drift.....	Furnace.....	5	3	Single.....	Mule.....	B. & O. S. W.
34	18	Drift.....	Fan.....	1	3½ to 4	Single.....	Mule.....	Ohio Southern.
25	4	Shaft.....	Fan.....	2	2 to 3	Double.....	Mule.....	B. & O. S. W.
25	4	Drift.....	Furnace.....	2	2½ to 3	Single.....	Mule.....	Ohio Southern.
26	6	Drift.....	Furnace.....	5	2 to 3½	Double.....	Mule.....	C. H. & D.
17	6	Slope.....	Fan.....	2	3 to 4	Double.....	Mule.....	B. & O. S. W.—C. H. & D.
12	3	Drift.....	Furnace.....	4	4	Double.....	Mule.....	D. S.
20	5	Drift.....	Furnace.....	4	4	Single.....	Mule.....	D. S.
15	4	Shaft.....	Fan.....	2	3½	Double.....	Mule.....	D. S.
23	10	Drift.....	Furnace.....	4	3½	Double.....	Mule.....	D. S.
25	15	Slope.....	Fan.....	2	3	Single.....	Mule.....	D. S.
12	4	Drift.....	Furnace.....	5	3	Double.....	Mule.....	D. S.
10	4	.....	.....	.....	.....	.....	.....	.....
16	8	.....	.....	.....	.....	.....	.....	.....
25	8	.....	.....	.....	.....	.....	.....	.....
46	13	.....	.....	.....	.....	.....	.....	.....
20	7	.....	.....	.....	.....	.....	.....	.....
9	3	.....	.....	.....	.....	.....	.....	.....
22	5	Drift.....	Furnace.....	.....	.....	Long Wall.....	Mule.....	B. & O. S. W.
10	7	.....	.....	.....	.....	.....	.....	.....
14	5	.....	.....	.....	.....	.....	.....	.....
19	7	Drift.....	Furnace.....	4	4½	Single.....	Rope.....	H. V.
30	4	Drift.....	Furnace.....	5	3½	Single.....	Mule.....	B. & O. S. W.
49	11	Drift.....	Furnace.....	4	4	Single.....	Mule.....	H. V.
30	7	Drift.....	Furnace.....	4	2 to 4	Single.....	Mule.....	H. V.
65	17	Shaft.....	Fan.....	4	2 to 4	Double.....	Mule.....	H. V.
21	4	Shaft.....	Fan.....	4	2 to 4	Double.....	Mule.....	C. H. & D.
20	6	Drift.....	Furnace.....	4	4	Double.....	Mule.....	D. S.

HON. E. G. BIDDISON, *Chief Inspector of Mines*,
COLUMBUS, OHIO.

Dear Sir—

In compliance with the custom of the Mining Department, I herewith submit to you the Fifth Annual Report of visits made to the mines located in the Second Mining District from November 15, 1902 to November 15, 1903. In my efforts to fully discharge the duties of my district as Mine Inspector I endeavored to visit the mines entrusted to my care as often as time and the duties of the office would permit. The larger per cent. of the mines were found to be in a fair condition generally, but at times one would be found in a state of disorder which is due to the various elements of danger which follows in the life of the miner. It was necessary in some instances to close a mine down until the safety of the workmen was secured. Six fatal accidents occurred in this district during the time covered by this report, four of which occurred in Athens County, one in Meigs and one in Gallia. The list of improvements made in this district during the year will be found in the body of this report. Two hundred and fourteen visits were made to the various mines of this district during the year. I regret to report that some time was lost caused from sickness and death in my family.

The conditions of employment for the past year, in a general way, were not as satisfactory as the previous one, although there were no strikes only of local nature. The mines worked only about half time due to the scarcity of orders. All the large mines of this district have up-to-date mining machinery installed. The triple entry system of ventilation and haulage is in practice in several of the large mines of this district, which produces a perfect system of ventilation and mine haulage where motors are in use.

The mines of Athens County consist, for the most part, of shafts mining the number six seam of coal, which is found at a depth of from seventy-five to three hundred and fifty feet. The number seven seam is found in paying quantities in different parts of the county and is five feet in thickness, and is found in the hills of York and Trimble townships. The number eight seam is found only in Berne township, which is eight feet in thickness, but is separated in the center by stratas of gray slate from nine to eighteen inches; this is a good coking coal. The county of Meigs is underlaid with the number eight seam of coal but it is only five feet thick; however, it has no separation or gray slate in it. Gallia County also has the number eight seam which, in nature and thickness compares with this seam in Meigs County. Lawrence County mines

the number five seam is found and is from three and one half to four feet thick. This coal is found in the hill tops. The mines located in this county are mostly worked on the single entry system and furnaces are used for the purpose of ventilation.

In conclusion I may say that the year has not been a very prosperous one from the miner's standpoint, but hope the outlook for this coming year will have a brighter view.

In submitting my report I wish to heartily thank the miners and operators of this district for their kind and courteous treatment, and you for valuable counsel and encouragement in my work.

Very respectfully submitted,

D. H. WILLIAMS, Glouster, Ohio.

Inspector for the Second Mining District.

SECOND MINING DISTRICT.

D. H. WILLIAMS, Inspector, Glouster, Ohio.

ATHENS COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Carbondale No. 2.....	Carbondale Coal Co., Carbondale, O.....	M. H. Doolittle, Carbondale, O.....
Carbondale No. 3.....	Carbondale Coal Co., Carbondale, O.....	M. H. Doolittle, Carbondale, O.....
Del Carbo.....	Del Carbo Coal Co., Athens, O.....	J. Scheurman, Carbondale, O.....
Brooks Hill.....	Hippel Coal Co., Coalton, O.....	W. D. Hippel, Coalton, O.....
Luhrig No. 1.....	Luhrig Coal Co., Luhrig, O.....	A. Lafferty, Luhrig, O.....
Luhrig No. 2.....	Luhrig Coal Co., Luhrig, O.....	A. Lafferty, Luhrig, O.....
Shingler.....	Giffen Coal Co., Carbondale, O.....	J. Giffen, Carbondale, O.....
Luhrig No. 3.....	Luhrig Coal Co., Luhrig, O.....	A. Lafferty, Luhrig, O.....
No. 252.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 254.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 256.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 311.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 266.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 267.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 201.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 203.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 204.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 205.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 275.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 281.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 255.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 31.....	McLeish Coal Co., Columbus, O.....	J. A. Richards, Glouster, O.....
Halbert.....	New York Coal Co., Columbus, O.....	P. C. Morris, Nelsonville, O.....
West Floodwood.....	G. C. Sileot, Nelsonville, O.....	Joshua Specker, Nelsonville, O.....
Maple Hill.....	Maple Hill Coal Co., Nelsonville, O.....	A. J. Juniper, Nelsonville, O.....
No. 3 or Half Hoon.....	Juniper & Barber, Nelsonville, O.....	Edw. Fluke, Jr., Nelsonville, O.....
No. 10 X.....	Sunday Creek Coal Co., Columbus, O.....	John F. Roberts, Corning, O.....
No. 10.....	Sunday Creek Coal Co., Columbus, O.....	Edw. Lynch, Jacksonville, O.....
No. 24.....	Northern Fuel Co., Jacksonville, O.....	
Wells.....	A. H. Wells, Nelsonville, O.....	
Imperial.....	Imperial Coal Co., Nelsonville, O.....	Zeth Williams, Doanville, O.....
Doanville.....	C. & H. C. & L. Co., Columbus, O.....	C. G. Newton, New Straitsville, O.....
No. 23.....	Hisylvania Coal Co., Trimble, O.....	J. W. Blower, Trimble, O.....
Utley No. 2 (suspended).....	Jennings Coal Co. & Coke, Utley, O.....	
Broadwell (suspended).....	O. Brent Gard, Marietta, O.....	G. W. Haybron, Broadwell, O.....
Federal Valley No. 1 (sus).....	Twin Vein Coal Co., Broadwell, O.....	T. J. Leyshon, Broadwell, O.....
Big Run (suspended).....	Big Run Coal Co., Big Run, O.....	C. L. Spriggs, Broadwell, O.....
Black Diamond.....	Black Diamond Coal & Coke Co., Columbus, O.....	
Sedalia.....	Sedalia Coal Co., Glouster, O.....	John Palmer, Glouster, O.....
Moore.....	Hocking Mining Co., Athens, O.....	Ed Moore.....

GALLIA COUNTY.

Carl No. 1.....	E. L. Carl, Carlton, O.....	H. V. Carl, Carlton, O.....
Carl No. 2.....	E. L. Carl, Carlton, O.....	H. V. Carl, Carlton, O.....
Vinton (new mine).....	Vinton Coal Co., Vinton, O.....	B. Thomas, Vinton, O.....

LAWRENCE COUNTY.

New Castle.....	Hanging Rock Iron Co., Hanging Rock, O.....	D. B. Macham, Hanging Rock, O.....
Pine Grove Ore.....	Hanging Rock Iron Co., Hanging Rock, O.....	
Kelley.....	Kelley Nail & Iron Co., Ironton, O.....	
Lawrence Mill.....	Halley Coal Co., Ironton, O.....	David Halley, Pedro, O.....
Halley.....	Halley & Wright, Pedro, O.....	Samuel Sutton, Pedro, O.....
Hall No. 1.....	Jno. F. Hall Coal Co., Dayton, O.....	
Nancy or Bartels.....	Nancy Kelley, Ironton, O.....	Ben Yates, Steece, O.....
Williard No. 1.....	E. B. Williard, Steece, O.....	
Williard No. 2.....	E. B. Williard, Steece, O.....	
Williard No. 3.....	E. B. Williard, Steece, O.....	
Williard No. 4.....	E. B. Williard, Steece, O.....	
Ginn.....	Ginn Coal Co., Ironton, O.....	G. Ginn, Ironton, O.....
Cement.....	Ironton Portland Cement Co., Ironton, O.....	
Belfont No. 2.....	Belfont Iron Co., Ironton, O.....	
Belfont No. 3.....	Belfont Iron Co., Ironton, O.....	
Black Fork.....	Black Fork Coal Co., Black Fork, O.....	C. W. Rogers, Black Fork, O.....
Irish Hollow.....	Black Fork Coal Co., Black Fork, O.....	C. W. Rogers, Black Fork, O.....
Clarke No. 4.....	Black Fork Coal Co., Black Fork, O.....	C. W. Rogers, Black Fork, O.....
Cl.....	Black Fork Coal Co., Black Fork, O.....	C. W. Rogers, Black Fork, O.....

SECOND MINING DISTRICT.

D. H. WILLIAMS, Inspector, Glouster, Ohio.

ATHENS COUNTY.

employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
13	10	Drift.	Fan	6	4	Double	Motor	B. & O. S. W.
15	15	Drift.	Fan	6	4	Double	Horse Power	B. & O. S. W.
28	30	Slope	Fan	6	4	Double	Motor	B. & O. S. W.
30	30	Slope	Fan	6	4	Double	Horse P.	B. & O. S. W.
78	78	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Slope	Fan	6	4	Double	Horse	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Rope	B. & O. S. W.
80	80	Shaft	Fan	6	6	Triple	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Triple	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Triple	Motor	B. & O. S. W.
80	80	Slope	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Drift	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Drift	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Drift	Fan	6	6	Double	Rope	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Horse	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Horse	B. & O. S. W.
80	80	Drift	Furnace	6	6	Double	Horse	B. & O. S. W.
80	80	Drift	Furnace	6	6	Double	Horse	B. & O. S. W.
80	80	Drift	Fan	6	6	Double	Rope	B. & O. S. W.
80	80	Drift	Furnace	6	6	Double	Horse	B. & O. S. W.
80	80	Slope	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Shaft	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Drift	Furnace	6	6	Double	Motor	B. & O. S. W.
80	80	Slope	Fan	6	6	Double	Motor	B. & O. S. W.
80	80	Slope	Fan	6	6	Double	Motor & Rope	B. & O. S. W.
80	80	Slope	Fan	6	6	Double	Motor & Rope	B. & O. S. W.
80	80	Drift	Fan	6	10	Double	Rope	B. & O. S. W.
80	80	Drift	Fan	6	10	Double	Rope	B. & O. S. W.
80	80	Drift	Fan	6	10	Double	Rope	B. & O. S. W.
80	80	Drift	Fan	6	10	Double	Rope	B. & O. S. W.
80	80	Drift	Fan	6	10	Double	Motor	B. & O. S. W.
80	80	Slope	Fan	7	5	Double	Rope	B. & O. S. W.
28	9	Drift	Furnace	8	5	Double	Horse	C. H. V. & T.
28	9	Drift	Furnace	8	5	Double	Horse	C. H. V. & T.
11	23			5	4	Double	Horse	N. & W.
11	9			5	4	Double	Horse	N. & W.
11	5			5	4	Double	Horse	N. & W.
11	9			5	4	Double	Horse	C. H. & D.
11	20			5	4	Double	Horse	C. H. & D.
11	7			5	4	Double	Horse	C. H. & D.
11	2	Natural			7	Single	Horse	C. H. & D.
11	2	Natural			7	Single	Horse	C. H. & D.
11	3	Natural			7	Single	Horse	C. H. & D.
11	1	Natural			7	Single	Horse	C. H. & D.
11	2	Natural			5	Double	Horse	
11	10	Natural			5	Double	Horse	
11	10	Natural			5	Double	Horse	
11	25							
11	20							
11	6							
11	8							

SECOND MINING DISTRICT—Concluded.

MEIGS COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Pascock No. 1.....	Bengal Bros., Pomeroy, O.....	A. W. Bengal, Pomeroy, O.....
Pascock No. 2.....	Bengal Bros., Pomeroy, O.....	A. W. Bengal, Pomeroy, O.....
Pascock No. 3.....	Bengal Bros., Pomeroy, O.....	A. W. Bengal, Pomeroy, O.....
Charter Oak.....	Charter Oak Mining Co., Pomeroy, O.....	B. J. Malone, Pomeroy, O.....
Syracuse Slope.....	Syracuse Coal & Salt Co., Syracuse, O.....	L. H. Bridgeman, Syracuse, O.....
Rolling Mill.....	Martin Ebersbach, Pomeroy, O.....	.....
Buckeye.....	Buckeye Salt Co., Pomeroy, O.....	Chas. McQuigg, Pomeroy, O.....
Rockville.....	Salisbury Coal Co., Columbus, O.....	.....
Noble Summit.....	Salisbury Coal Co., Columbus, O.....	.....
Silver Run.....	W. C. Russell, Middleport, O.....	.....
Dabney.....	Monkey Run Coal Co., Middleport, O.....	.....
Pittsburg.....	Pittsburg Coal Co., Pomeroy, O.....	J. M. Woodward, Pomeroy, O.....
Coal Ridge.....	Coal Ridge Coal & Salt Co., Pomeroy, O.....	J. W. Thomas, Pomeroy, O.....
Glendale.....	Russell & Co., Pomeroy, O.....	.....
Koehler.....	J. L. Scott, Pomeroy, O.....	.....

THIRD MINING DISTRICT.

JOHN WINEFORDNER, Inspector, Duncan's Falls, Ohio.

PERRY COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
No. 301.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Congo, O.....
No. 302.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Congo, O.....
No. 253.....	Continental Coal Co., Columbus, O.....	D. C. Thomas, Glouster, O.....
No. 268.....	Continental Coal Co., Columbus, Oo.....	D. C. Thomas, Glouster, O.....
No. 21.....	Sunday Creek Coal Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 8.....	Sunday Creek Coal Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 20.....	Buckeye Coal & Ry. Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 9.....	Buckeye Coal & Ry. Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 12.....	Buckeye Coal & Ry. Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 5.....	Buckeye Coal & Ry. Co., Columbus, O.....	Edward Fluke, Nelsonville, O.....
No. 3.....	C. & H. C. & I. Co., Columbus, O.....	C. G. Newton, N. Straitsville, O.....
No. 53 A.....	Ambrose Gibbs, New Straitsville, O.....	H. Essex, N. Straitsville, O.....
No. 37.....	Essex Coal Co., New Straitsville, O.....	John E. Jones, N. Straitsville, O.....
No. 13.....	Jones Bros. New Straitsville, O.....	John E. Jones, N. Straitsville, O.....
No. 15.....	Jones Bros., New Straitsville, O.....	Wm. Alexander, N. Straitsville, O.....
No. 49.....	Alexander Coal Co., New Straitsville, O.....	Wm. White, N. Straitsville, O.....
No. 7.....	White & Co., New Straitsville, O.....	Richard Johnson, N. Straitsville, O.....
Johnson.....	Johnson Coal Co., New Straitsville, O.....	J. H. Taylor, N. Straitsville, O.....
Black Diamond No. 3.....	Taylor & Price, New Straitsville, O.....	E. W. Lewis, Shawnee, O.....
Furnace No. 2.....	W. A. Gosline & Son, Toledo, O.....	Daniel Jenkins, Shawnee, O.....
Double X. No. 1.....	Taylor Williams & Co., Shawnee, O.....	Daniel Jenkins, Shawnee, O.....
Double X. No. 2.....	Taylor Williams & Co., Shawnee, O.....	Reese Williams, Shawnee, O.....
Upton No. 1.....	Upton Coal Co., Shawnee, O.....	Reese Williams, Shawnee, O.....
Upton No. 2.....	Upton Coal Co., Shawnee, O.....	W. E. Williams, Shawnee, O.....
Shawnee Valley.....	Maynard Bros., Columbus, O.....	W. E. Williams, Shawnee, O.....
Lyonsdale.....	Maynard Bros., Columbus, O.....	W. E. Williams, Shawnee, O.....
Iron Point No. 3.....	Iron Point Low Vein Coal Co., Shawnee, O.....	D. S. Richards, Shawnee, O.....
Hazleton.....	George Gibbs, N. Straitsville, O.....	Wm. Wallace, Redfield, O.....
Chestnut Ridge No. 2.....	A. P. Simons, Redfield, O.....	Wm. Wallace, Redfield, O.....
Midway No. 1.....	20th Century Coal Co., Columbus, O.....	Wm. Wallace, Redfield, O.....
Midway No. 2.....	20th Century Coal Co., Columbus, O.....	Edw. Davis, Roseville, O.....
Midway No. 3.....	20th Century Coal Co., Columbus, O.....	Edw. Davis, Roseville, O.....
New Crescent No. 2.....	Kennoh Coal & Mining Co., Cleveland, O.....	Geo. Green, Lyonsdale, O.....
New Crescent No. 3.....	Kennoh Coal & Mining Co., Cleveland, O.....	M. C. Welling, Corning, O.....
Lyonsdale New.....	Muskingum Valley Coal Co., Detroit, Mich.....	Peter McKinney, Zanesville, O.....
North West.....	North West Coal Co., Toledo, O.....	Peter McKinney, Zanesville, O.....
Keystone No. 1.....	Zanesville Coal Co., Zanesville, O.....	Peter McKinney, Zanesville, O.....
Keystone No. 2.....	Zanesville Coal Co., Zanesville, O.....	Peter McKinney, Zanesville, O.....
Keystone No. 3.....	Zanesville Coal Co., Zanesville, O.....	Peter McKinney, Zanesville, O.....
Keystone No. 4.....	Zanesville Coal Co., Zanesville, O.....	Lon Tague, McLuney, O.....
Beech Grove No. 6.....	Opperman Coal Co., Cambridge, O.....	Chas. Hall, Columbus, O.....
Union North Side.....	Ohio Coal & Cement Co., Columbus, O.....	Jas. H. Davis, N. Lexington, O.....
Valley Mine (105).....	Imperial Coal Mining Co., Columbus, O.....	John Jones, Crooksville, O.....
Rends.....	Standard Hocking Coal Co., Chicago, Ill.....	Sam Steel, R.R. No. 2, N. Lexington
No. 1.....	Hamilton & Wallace, Redfield, O.....	Sam Steel, R.R. No. 2, N. Lexington
No. 2.....	Hamilton & Wallace, Redfield, O.....	.....
San Toy No. 1.....	New England Coal Co., Columbus, O.....	J. F. Roberts, Corning, O.....
San Toy No. 1.....	New England Coal Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 321.....	Sunday Creek Coal Co., Columbus, O.....	J. F. Roberts, Corning, O.....
No. 322.....	Sunday Creek Coal Co., Columbus, O.....	Evan Roberts, Hemlock, O.....
No. 13.....	Sunday Creek Coal Co., Columbus, O.....	George Blood, Newark, O.....
Pine Run.....	Maynard Bros., Columbus, O.....	Septimus Bland, N. Lexington, O.....
Bristol No. 1.....	Bristol Coal Co., Newark, O.....	Jos. Griffith, N. Lexington, O.....
Tyson.....	Tyson Coal Co., Washington, C. H., O.....	.....
Griffith.....	Griffith Coal Co., New Lexington, O.....	.....

MUSKINGUM COUNTY.

Princess.....	Duncan Run Coal Co., Detroit, Michigan.....	W. H. Blaney, Dillon, O.....
Princess No. 2.....	Duncan Run Coal Co., Detroit, Michigan.....	W. H. Blaney, Dillon, O.....
Oak Knob.....	Winchester Coal Co., Detroit, Michigan.....	W. H. Blaney, Dillon, O.....
Colonial.....	John Reed, Zanesville, O.....	C. F. Siler, McConnellsville, O.....
Granger.....	Siler Coal Co., McConnellsville, O.....	Chas. Garrett, Philo, O.....
Garrett.....	Dawson Coal Co., Senoover, O.....	Jasper Souders, Gaysport, O.....
Blue Rock.....	Blue Rock Coal Co., Gaysport, O.....	.....
Epply.....	David Epply, R. F. D., Zanesville, O.....	Bruce Mauk, Dillon, O.....
No. 16.....	Maynard Bros., Columbus, O.....	Bruce Mauk, Dillon, O.....
Peacock No. 2.....	Maynard Bros., Columbus, O.....	.....

THIRD MINING DISTRICT.

JOHN WINEFORDNER, Inspector, Duncan's Falls, Ohio.
PERRY COUNTY.

No. of shafts employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
10	56	Shaft.	Fan.	6	12	Double.	Electric.	Congo, O., Z. & W. R. R.
13	57	Shaft.	Fan.	6	12	Double.	Electric.	Congo, O., Z. & W. R. R.
11	61	Shaft.	Fan.	6	12	Double.	Electric.	Rendville, O., Ohio Central R. R.
16	62	Slope.	Fan.	6	12	Double.	Electric.	Rendville, O., Ohio Central R. R.
12	57	Drift.	Fan.	6	8	Double.	Electric.	Carrington, O., Z. & W. R. R.
5	25	Shaft.	Fan.	6	12	Double.	Electric.	T. & O. C. R. R.
5	25	Slope.	Fan.	6	6½	Double.	Rope.	Hemlock, O., Z. & W. R. R.
5	43	Slope.	Fan.	6	9	Double.	Electric.	Carrington, O., Z. & W. R. R.
20	20	Slope.	Fan.	6	9	Double.	Rope.	Carrington, O., Z. & W. R. R.
8	25	Drift.	Furnace.	6	8	Double.	Electric.	N. Straitsville, O., H. V. R. R.
8	88	Drift.	Fan.	6	10	Double.	Elec & Rope	Shawnee, O., B. & O. R. R.
5	3	Drift.	Natural.	6	10	Double.	Mule.	Shawnee, O., B. & O. R. R.
7	14	Drift.	Fan.	6	10	Double.	Electric.	N. Straitsville, O., H. V. R. R.
4	2	Drift.	Natural.	6	10	Single.	Mule.	N. Straitsville, O., H. V. R. R.
8	4	Drift.	Natural.	6	10	Single.	Mule.	N. Straitsville, O., H. V. R. R.
8	1	Drift.	Furnace.	6	10	Double.	Mule.	N. Straitsville, O., H. V. R. R.
7	1	Drift.	F. Basket.	6	8	Double.	Mule.	N. Straitsville, O., H. V. R. R.
20	4	Drift.	Natural.	6	8	Double.	Mule.	N. Straitsville, O., H. V. R. R.
5	3	Drift.	Furnace.	6	8	Single.	Mule.	Shawnee, O., B. & O. R. R.
5	32	Drift.	Natural.	6	8	Pillar.	Mule.	Shawnee, O., B. & O. R. R.
35	2	Drift.	Fan.	6	8	Double.	Rope.	Shawnee, O., B. & O. R. R.
12	2	Drift.	F. Basket.	6	8	Pillar.	Mule.	Shawnee, O., B. & O. R. R.
7	7	Drift.	Furnace.	6	12	Pillar.	Mule.	Shawnee, O., B. & O. R. R.
18	18	Drift.	Fan.	6	12	Double.	Electric.	Shawnee, O., B. & O. R. R.
8	3	Drift.	Fan.	6	8	Pillar.	Rope.	Shawnee, O., B. & O. R. R.
3	3	Drift.	Natural.	6	8	Pillar.	Mule.	Shawnee, O., B. & O. R. R.
20	4	Drift.	F. Basket.	6	5½	Double.	Mule.	Shawnee, O., B. & O. R. R.
20	2	Drift.	Furnace.	6	12	Single.	Mule.	Shawnee, O., B. & O. R. R.
20	9	Drift.	Ex. Steam.	5	4½	Double.	Mule.	Saltillo, O., Z. & W.
20	7	Drift.	F. Basket.	5	4½	Double.	Mule.	Saltillo, O., Z. & W.
20	9	Drift.	Furnace.	5	4½	Double.	Mule.	Saltillo, O., Z. & W.
15	14	Drift.	Furnace.	6	4½	Double.	Mule.	Roseville, O., C. & M. V. R. R.
20	2	Drift.	F. Basket.	6	4½	Single.	Mule.	Roseville, O., C. & M. V. R. R.
33	32	Drift.	Fan.	6	3½	Double.	Electric.	Roseville, O., C. & M. V. R. R.
10	21	Slope.	Fan.	6	8	Double.	Electric.	Corning, O., Ohio Central R. R.
39	22	Drift.	Fan.	6	3 ft. 8 in.	Double.	Electric.	Crooksville, O., C. & M. V. R. R.
30	14	Drift.	Furnace.	6	3 ft. 8 in.	Double.	Electric.	C. & M. V., McLuney, O.
30	14	Drift.	Furnace.	6	3 ft. 8 in.	Double.	Electric.	C. & M. V., Roseville, O.
15	3	Drift.	Furnace.	6	3½	Double.	Electric.	C. & M. V., McLuney, O.
74	30	Drift.	Fan.	6	3 ft. 8 in.	Double.	Electric.	C. & M. V., McLuney, O.
29	7	Drift.	Furnace.	6	3 ft. 8 in.	Double.	Mule.	C. & M. V., Roseville, O.
35	13	Drift.	Fan.	6	3 ft. 8 in.	Double.	Electric.	C. & M. V., New Lexington, O.
33	9	Drift.	Fan.	6	3 ft. 8 in.	Double.	Electric.	C. & M. V., Crooksville, O.
23	6	Drift.	Furnace.	6	3½	Double.	Mule.	Z. & W., Saltillo, O.
10	3	Drift.	Furnace.	6	3½	Double.	Mule.	Z. & W., Saltillo, O.
20	10	Shaft.	Fan.	6	3 ft. 8 in.	Double.	Electric.	Z. & W. R. R., Sayre, O.
15	6	Shaft.	Fan.	6	3 ft. 8 in.	Double.	Electric.	Z. & W. R. R., Sayre, O.
73	21	Shaft.	Fan.	6	3 ft. 8 in.	Double.	Electric.	Z. & W. R. R., Misco, O.
71	16	Slope.	Fan.	6	3 ft. 8 in.	Double.	Rope.	Z. & W. R. R., Misco, O.
52	15	Drift.	Fan.	6	4	Double.	Mule.	Z. & W. R. R., Carrington, O.
54	10	Drift.	Fan.	6	4	Double.	Mule.	B. & O., Bristol, O.
2	4	Drift.	Furnace.	7	6	Double.	Mule.	Sealover, O., O. & L. K. R. R.
2	2	Drift.	Furnace.	6	3	Double.	Mule.	Sealover, O., O. & L. K. R. R.
2	2	Drift.	Furnace.	7	6	Double.	Mule.	Sealover, O., O. & L. K. R. R.
3	3	Drift.	Furnace.	6	3 ft. 8 in.	Double.	Mule.	Buckeye, O., O. & L. K. R. R.
2	2	Drift.	Furnace.	6	3	Double.	Mule.	Sealover, O., O. & L. K. R. R.
4	4	Drift.	Furnace.	7	4	Double.	Mule.	Sealover, O., O. & L. K. R. R.
4	7	Drift.	Natural.	6	3	Double.	Mule.	Wagon Mine.
7	7	Drift.	Furnace.	7	4	Double.	Mule.	Cannellville, O., Z. & W. Ry.
5	5	Drift.	Furnace.	6	4	Double.	Mule.	Cannellville, O., Z. & W. Ry.

THIRD MINING DISTRICT—Concluded.

MUSKINGUM COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
No. 37.....	Maynard Bros., Columbus, O.	Bruce Mauk, Dillon, O.
No. 11.....	Salsburg Coal Co., West Bay City, Michigan...	Jack Davies, Dillon, O.
Walnut Hill No. 2.....	Ohio & Michigan Coal Co., Detroit, Michigan...	.....
Smith.....	Wm. Blaney, Dillon, O. ....	.....
Neal.....	Allen Neal, Dillon, O. ....	.....
Sauders or No. 10.....	Muskingum Coal & Ry. Co., Zanesville, O.	L. D. Able, Zanesville,
Bolen No. 1.....	J. C. Bolen, Zanesville, O. ....	.....
Bolen No. 2.....	J. C. Bolen, Zanesville, O. ....	.....
Northern No. 1.....	Northern Coal Co., .....	.....
Raney No. 2.....	Elk Coal Co.,	Wm. Raney, Columbus, O.
Diamond No. 3.....	C. W. Joslin & Co., Zanesville, O.	A. B. Mullen, Zanesville, O. ..
Lehew.....	Geo. M. Lehew, Zanesville, O. ....	.....
Harpers 3 Foot.....	Thomas Harper, Zanesville, O. ....	.....
Harpers 4 Foot.....	Thomas Harper, Zanesville, O. ....	.....
Oak Hill.....	Detenbeck & Son, Zanesville, O.	J. A. Detenbeck, Zanesville, O. ..
Griener.....	Griener & Pierce, Zanesville, O.	Harry Griener, Zanesville, O. ..
Swanks.....	Wm. Bryan, Zanesville, O. ....	.....
Huff Bros.....	Huff Bros., .....	.....
Fisher.....	M. L. Fisher, Zanesville, O. ....	.....

MORGAN COUNTY.

Tropic.....	Tropic Mining Co., Rose Farm, O.	Thos. Underwood, Crooksville, O.
Carding.....	Carding Coal Co., Rose Farm, O.	John Carding, Rose Farm, O.

THIRD MINING DISTRICT—Concluded.

MUSKINGHAM COUNTY—Concluded.

Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
Drift.....	Furnace.....	6	3 ft 8 in	Double.....	Mule.....	Cannellville, O., Z. & W. Ry.
Drift.....	Furnace.....	6	3 ft 8 in	Double.....	Mule.....	Cannellville, O., Z. & W. Ry.
Drift.....	Furnace.....	6	3 ft 8 in	Double.....	Mule.....	Cannellville, O., Z. & W. Ry.
Drift.....	F. Basket.....	6	3	Single.....	Dogs.....	Cannellville, O., Z. & W. Ry.
Drift.....	F. Basket.....	6	3 ft 8 in	Single.....	Mules.....	Cannellville, O., Z. & W. Ry.
Drift.....	Furnace.....	6	3½	Single.....	Mules.....	Buckeye, O., Z. & W. Ry.
Drift.....	Natural.....	6	3½	Single.....	Mules.....	Buckeye, O., Z. & W. Ry.
Drift.....	Natural.....	6	3½	Single.....	Mules.....	Buckeye, O., Z. & W. Ry.
Drift.....	.....	6	3½	Double.....	Mules.....	Zanesville, O., Wabash R. R.
Drift.....	.....	6	3½	Double.....	Mules.....	Zanesville, O., Wabash R. R.
Drift.....	F. Basket.....	7	6	Double.....	Mules.....	Zanesville, O., B. Z. & C. Ry.
Drift.....	F. Basket.....	6	3	Single.....	Dogs.....	.....
Drift.....	F. Basket.....	6	3	Single.....	Dogs.....	.....
Drift.....	F. Basket.....	5	4	Single.....	Mules.....	.....
Drift.....	Furnace.....	7	5	Single.....	Mules.....	.....
Drift.....	Basket.....	7	4	Single.....	Mules.....	.....
Drift.....	Furnace.....	7	4	Single.....	Mules.....	.....
Drift.....	Natural.....	6	3	Single.....	Mules.....	.....
Drift.....	Basket.....	6	3	Single.....	Mules.....	.....
Drift.....	Fan.....	6	4	Double.....	Rope.....	Rose Farm, O., Z. & W. Ry.
Drift.....	Fan.....	6	4	Double.....	Mule.....	Rose Farm, O., Z. & W. Ry.

HON. E. G. BIDDISON, *Chief Inspector of Mines*,
COLUMBUS, OHIO.

Dear Sir—

The condition of the coal trade of the mines in the Fourth Mining District has not been so good as the previous year, owing to a variety of reasons such as the unsettled condition of the coal trade, the opening up of a great number of large mines in the several counties of this district, and the enlarging of old ones many of which have been installed with modern machinery which will increase their capacity nearly two-thirds. The increased output of coal together with the inability of the railroads to furnish cars to the mines, caused the trade to be very unsettled and the miners felt the results in working on the average about one-third less time than the preceding year. However, the first of the year trade conditions for both miners and operators were fair, but the latter part of the year the trade suffered to quite an extent.

The great increase in the output of coal has not, we regret to say, been without a corresponding increase in the number of fatalities. Men are rushed into the mines, who have never seen one before, with no conception whatever of the manner of work they are expected to do, unable to speak or understand one word of English, unacquainted with the mining laws and who are incapable of looking after their own safety, and are a constant menace to their fellow workman. This is especially true in their manner of handling explosives, and where there is inflammable gas to contend with. We have had during the year three explosions of powder and two of gas from this cause, and it was owing to this fact that it was almost impossible to make a proper investigation of these accidents as all the testimony had to be taken through an interpreter, and as a natural consequence the survivors pleaded "not guilty," notwithstanding there were evidences of the most terrible criminal carelessness. A remedy for this state of affairs is necessary and should receive immediate attention. It is our opinion that no man should be employed in a mine who does not know enough of the English language to read and observe the mining laws. This is necessary in order that the instructions of the inspector may be understood when warning them of the dangers to which they are exposed while at their work. One instance was related of where a miner lighted his squib and then was so ignorant of the action of the powder that he stood over the charge and awaited the explosion, which of course, resulted fatally. Had another man been working with him he also would have shared the same fate, or have been fatally injured. The total number of fatal accidents for the year reached forty-two, ten of which

were due to the grossest kind of carelessness, combined with the inability to understand the laws made for their safety; twenty-eight were due to negligence in setting posts, etc., and twenty-six out of the twenty-eight were unable to speak or understand English. Four men were killed by explosions of powder, all of whom were foreigners. Altogether there were thirty-eight accidents out of the forty-two which could have been prevented had the men been able to obey the laws framed for their protection. These appalling figures speak for themselves.

Twenty-one new mines have been opened up during the year, all large ones, and equipped with the finest modern conveniences for handling coal in a speedy and economical manner. Fourteen air shafts, seven furnaces, thirteen fans, fourteen outlets and two stairways, or a total of fifty marks the number of improvements for the year in this district. One hundred and seventy-nine visits were made during the year to the various mines of which this district is comprised. There were tested during the year thirty-nine sets of scales, and with the exception of four, all were found strictly correct. This unnecessary testing of scales has been a source of great expense and annoyance to the Inspector as the most of this work has been done in the winter when the roads were almost impassable, and owing to the scarcity of test weights, there being only eight for this district, and over one hundred large mines, it is necessary to transport them long distances over bad roads or ship them by express or freight. This method sometimes causes several days of delay, and costs more at times than an adequate number of weights. As a remedy for this state of affairs we would suggest that two weights be kept on the tippie either by the State or operator at each mine, or where several mines are located in close proximity, they could be kept at the one most centrally located, and should a dispute occur about the scales the matter could be settled, in a great number of cases, without an appeal to the Inspector, as the test weights would be on hand and the check-weighman and the mine committee in conjunction with the operators could make the test. We trust this will meet with your favorable consideration.

While the mining laws have been generally well observed, and the operators have installed large fans for the purpose of ventilating their mines, still there is a great deal of unnecessary shooting done at all times causing large quantities of powder smoke to pollute the air current. There should be some restrictions placed on this practice by either having a uniform time for firing shots or something of this nature.

We wish to thank both miners and operators for their help given us in the discharge of our duties throughout the past year and hope for a continuance of the same pleasant relations. I am,

Very truly yours,

THOS. MCGOUGH, Bridgeport, Ohio.

Inspector for the Fourth Mining District.

FOURTH MINING DISTRICT.

THOMAS MCGOUGH, Inspector, Bridgeport, Chio.

BELMONT COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Wheeling Creek No. 1.....	Lorain Coal & Dock Co., Cleveland, O.....	J. E. Waters, Bridgeport, O.....
Wheeling Creek No. 2.....	Lorain Coal & Dock Co., Cleveland, O.....	J. E. Waters, Bridgeport, O.....
Lansing.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Johnson, Bridgeport, O.....
Cresecent No. 2.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, O.....
Cresecent No. 3.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, O.....
Cresecent No. 4.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, O.....
Cresecent No. 5.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, O.....
Cresecent No. 6.....	Lorain Coal & Dock Co., Cleveland, O.....	Jas. Birkbeck, Bridgeport, O.....
Moore's Run.....	Moore's Run Coal Co., Bridgeport, O.....	B. F. Jones, Bridgeport, O.....
Barton.....	Youghiogheny-Ohio Coal Co., Barton, O.....	T. W. Jones, Barton, O.....
Maple Hill.....	Youghiogheny-Ohio Coal Co., Barton, O.....	T. W. Jones, Barton, O.....
Boggs.....	Boggs Coal Co., Barton, O.....	E. N. Boggs, Barton, O.....
Taggarts No. 2.....	Barton Coal Co., Barton, O.....	Jno. Selway, Barton, O.....
Lydia.....	Purseglove Coal Co., Maynard, O.....	S. Purseglove, Flushing, O.....
Flushing.....	Flushing Coal Co., Flushing, O.....	W. G. Williams, Flushing, O.....
Kenon No. 2.....	Kenon Coal & Mining Co., Cleveland, O.....	Jno. Whalen, Flushing, O.....
Buckeye.....	Buckeye Coal Co., Flushing, O.....	C. A. Jewell, Flushing, O.....
Troll No. 1.....	Troll Mining Co., St. Clairsville, O.....	C. Troll, St. Clairsville, O.....
Troll No. 2.....	Troll Mining Co., St. Clairsville, O.....	C. Troll, St. Clairsville, O.....
Schicks.....	M. J. Schick Coal Co., Bellaire, O.....	M. J. Schick, Bellaire, O.....
Neffs No. 1.....	Neff Mining Co., Neffs, O.....	Alex Neff, Neffs, O.....
O. & W. Va.....	Belmont Coal Co., Neffs, O.....	J. B. Smail, Neffs, O.....
Black Diamond.....	Belmont Coal Co., Neffs, O.....	J. B. Smail, Neffs, O.....
Echo (Idle).....	Belmont Coal Co., Neffs, O.....	J. B. Smail, Neffs, O.....
Kings Run.....	Belmont Coal Co., Neffs, O.....	J. B. Smail, Neffs, O.....
Glen.....	Belmont Coal Co., Neffs, O.....	J. B. Smail, Neffs, O.....
Franklin.....	Hart Coal Co., Stewartsville, O.....	E. Wise, Stewartsville, O.....
Dellora No. 1.....	Weaver Coal Co., Glencoe, O.....	H. S. Bollman, Glencoe, O.....
Dellora No. 2.....	Weaver Coal Co., Glencoe, O.....	H. S. Bollman, Glencoe, O.....
Neffs No. 2.....	Neff Coal Co., Neffs, O.....	Alex Neff, Neffs, O.....
Pipe Creek.....	Johnson Coal Co., Dillies Bottom, O.....	D. B. Brooks, Bellaire, O.....
Wegee.....	Hart Coal Co., Ambler, O.....	Edw. Wise, Stewartsville, O.....
Pultney.....	Pultney Coal Co., Bellaire, O.....	Jacob Long, Bellaire, O.....
Empire No. 1.....	Empire Coal Co., Bellaire, O.....	J. A. Trimbath, Bellaire, O.....
Empire No. 2.....	Empire Coal Co., Bellaire, O.....	J. A. Trimbath, Bellaire, O.....
Empire No. 6.....	Empire Coal Co., Bellaire, O.....	J. A. Trimbath, Bellaire, O.....
Nail Mill.....	Carnegie Steel Co., Bellaire, O.....	James Donley, Bellaire, O.....
Aetna Standard.....	American Sheet Steel Co., Martins Ferry, O.....	Roger Ashton, Martins Ferry, O.....
Tin Plate.....	American Tin Plate Co., Martins Ferry, O.....	Lee Woods, Martins Ferry, O.....
Gaylord.....	Pittsburg-Cleveland Coal Co., Martins Ferry, O.....	T. E. Santer, Martins Ferry, O.....
Laughlin.....	Laughlin Nail Co., Martins Ferry, O.....	W. L. Glessner, M. Ferry, O.....
Captina.....	Captina Coal Co., Armstrong Mills, O.....	Wm. Rankin, Armstrong Mills, O.....
Belmont No. 1.....	Hall & Gillhooley, Bellaire, O.....	.....
New Shaft.....	Burton, Beidler & Phillips, Cleveland, O.....	.....
Summit No. 1.....	Summit Coal Co., Flushing, O.....	C. A. Jewell, Flushing, O.....
Summit No. 2.....	Summit Coal Co., Flushing, O.....	C. A. Jewell, Flushing, O.....

HARRISON COUNTY.

Roby No. 1.....	Roby Coal Co., Cleveland, O.....	W. L. Moke, Robyville, O.....
Roby No. 2.....	Roby Coal Co., Cleveland, O.....	W. L. Moke, Robyville, O.....
Ewing.....	Pittsburg Block Coal Co., Pittsburg, Pa.....	A. E. Rippert, Ginter, O.....
Clover Leaf.....	Cuyahoga Coal Co., Cleveland, O.....	Wm. Nixon, Bowerstown, O.....
Tippecanoe.....	Scott & Ogilvie Coal Co., Tippecanoe, O.....	George Selway, Tippecanoe, O.....

JEFFERSON COUNTY.

Walnut Hill.....	O. & P. Coal Co., Cleveland, O.....	John Nixon, Yorkville, O.....
Russell.....	Russell Coal Co., Tiltonville, O.....	Geo. McKitterick, Steubenville, O.....
Kelley.....	Lewis Coal & Coke Co., Portland Station, O.....	E. Lewis, Warrenton, O.....
Rush Run.....	Glen Run Coal Co., Cleveland, O.....	W. M. Bates, Rush Run, O.....
Edgar No. 1.....	Glen Run Coal Co., Cleveland, O.....	Thomas Thomas, Dillonvale, O.....
Edgar No. 2.....	Glen Run Coal Co., Cleveland, O.....	Thos. Thomas, Dillonvale, O.....
Brothy.....	M. L. Williamson Coal Co., Portland, O.....	Thos. Simpson, Portland, O.....
Portland.....	Portland, Coal Co., Wheeling, W. Va.....	Samuel Kinsey, Wheeling, W. Va.....

FOURTH MINING DISTRICT.

THOMAS MCGOUGH, Inspector, Bridgeport, Ohio.

BELMONT COUNTY.

employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation	No. of seams penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
50	4	Drift.....	Furnace....	8	5 1/2	Double.....	Rope.....	Bridgeport, O., C. L. & W. R. R.
50	15	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Bridgeport, O., C. L. & W. R. R.
50	15	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Bridgeport, O., C. L. & W. R. R.
50	20	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Crescent, O., C. L. & W. R. R.
50	20	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Crescent, O., C. L. & W. R. R.
50	30	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Crescent, O., C. L. & W. R. R.
50	12	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Crescent, O., C. L. & W. R. R.
50	4	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Crescent, O., C. L. & W. R. R.
50	6	Drift.....	Fan.....	8	5 1/2	Double.....	Mule.....	Bridgeport, O., C. L. & W. R. R.
50	30	Drift.....	Fan.....	8	5 1/2	Double.....	Rope.....	Near Barton, O., C. L. & W. R. R.
50	35	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Near Barton, O., C. L. & W. R. R.
50	20	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Near Barton, O., C. L. & W. R. R.
50	20	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Near Barton, O., C. L. & W. R. R.
50	15	Drift.....	Furnace....	8	6	Double.....	Mules.....	Near Maynard, O., C. L. & W.
50	20	Drift.....	Fan.....	8	4	Double.....	Electric.....	Near Flushing, O., C. L. & W.
50	20	Drift.....	Fan.....	8	4 1/2	Double.....	Electric.....	Near Flushing, O., C. L. & W.
50	15	Drift.....	Furnace....	8	4 1/2	Double.....	Mules.....	Near Flushing, O., C. L. & W.
50	15	Drift.....	Furnace....	8	5 1/2	Double.....	Mules.....	Near Maynard, O. Wabash R.R.
50	10	Drift.....	Furnace....	8	5 1/2	Double.....	Mules.....	Near Maynard, O. Wabash R.R.
50	15	Drift.....	Fan.....	8	5 1/2	Double.....	Mules.....	Near Bellaire, O., B. & O. R. R.
50	10	Drift.....	Fan.....	8	5 1/2	Double.....	Mules.....	Near Bellaire, O., B. & O. R. R.
50	20	Drift.....	Fan.....	8	5 1/2	Double.....	Rope.....	Near Bellaire, O., B. & O. R. R.
50	40	Drift.....	Fan.....	8	5 1/2	Double.....	Rope.....	Near Bellaire, O., B. & O. R. R.
50	10	Slope.....	Natural.....	8	5	Double.....	Rope.....	Near Bellaire, O., B. & O. R. R.
50	20	Slope.....	Fan.....	8	5	Double.....	Rope.....	Near Bellaire, O., B. & O. R. R.
50	10	Drift.....	Furnace....	8	5	Double.....	Electric.....	Near Bellaire, O., B. & O. R. R.
50	20	Shaft.....	Fan.....	8	5	Double.....	Mules.....	Bellaire, O., B. & O. R. R.
50	4	Shaft.....	Fan.....	8	5	Double.....	Mules.....	Bellaire, O., B. & O. R. R.
50	4	Drift.....	Fan.....	8	5	Double.....	Mules.....	Bellaire, O., B. & O. R. R.
50	15	Slope.....	Fan.....	8	5 ft 8 in	Double.....	Rope.....	Near Bellaire, O., C. & P. R. R.
50	8	Slope.....	Fan.....	8	5 ft 8 in	Double.....	Rope.....	Near Bellaire, O., C. & P. R. R.
50	25	Slope.....	Fan.....	8	5 ft 8 in	Double.....	Rope & Ele.	Near Bellaire, O., C. & P. R. R.
50	30	Slope.....	Fan.....	8	5 1/2	Double.....	Rope & Ele.	Near Bellaire, O., C. & P. R. R.
50	30	Slope.....	Fan.....	8	5 1/2	Double.....	Rope & Ele.	Near Bellaire, O., C. & P. R. R.
50	20	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Near Bellaire, O., C. & P. R. R.
50	10	Drift.....	Furnace....	8	5 1/2	Double.....	Mules.....	Martins Ferry, O., C. L. & W.
50	15	Drift.....	Fan.....	8	5 1/2	Double.....	Electric.....	Martins Ferry, O., C. L. & W.
50	20	Drift.....	Furnace....	8	5 1/2	Double.....	Electric.....	Martins Ferry, O., C. L. & W.
50	8	Drift.....	Fan.....	8	5 1/2	Double.....	Rope.....	Martins Ferry, O., C. L. & W.
50	6	Shaft.....	Fan.....	8	6	Double.....	Mules.....	Bellaire, O., O. & W. R. R.

50	40	Drift.....	Fan.....	8	5	Double.....	Electric.....	Adena, O., W. & L. E. R. R.
50	5	Drift.....	Fan.....	8	5	Double.....	Electric.....	Adena, O., W. & L. E. R. R.
50	15	Drift.....	Furnace....	8	4 to 8	Double.....	Electric.....	Adena, O., W. & L. E. R. R.
50	10	Drift.....	Furnace....	7	4	Double.....	Mules.....	Adena, O., W. & L. E. R. R.
50	12	Drift.....	Furnace....	7	4 to 7	Double.....	Electric.....	Near Tip., O., C. L. & W. R. R.

50	30	Drift.....	Fan.....	8	5	Double.....	Electric.....	C. & P. R. R.
50	15	Drift.....	Furnace....	8	5	Double.....	Mules.....	C. & P. R. R.
50	15	Drift.....	Fan.....	8	5	Double.....	Electric.....	C. & P. R. R.
50	18	Drift.....	Furnace....	8	5	Double.....	Mules.....	C. & P. R. R.
50	20	Drift.....	Fan.....	8	5	Double.....	Electric.....	W. & L. E. R. R.
50	20	Drift.....	Fan.....	8	5	Double.....	Electric.....	W. & L. E. R. R.
50	4	Drift.....	F. Basket...	8	5	Double.....	Mules.....	W. & L. E. R. R.
50	23	Drift.....	Furnace....	8	5	Double.....	Mules.....	W. & L. E. R. R.

FOURTH MINING DISTRICT—Concluded.

JEFFERSON COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Conner No. 1.....	W. & L. E. Coal Co., Cleveland, O.	Fred Hornickel, Dillonvale, O..
Conner No. 2.....	W. & L. E. Coal Co., Cleveland, O.	Fred Hornickel, Dillonvale, O..
Dillon No. 2.....	W. & L. E. Coal Co., Cleveland, O.	Fred Hornickel, Dillonvale, O..
Long Run.....	W. & L. E. Coal Co., Cleveland, O.	Fred Hornickel, Dillonvale, O..
Morris & Poston.....	Morris & Poston Coal Co., Cleveland, O.	L. D. Poston, Mt. Pleasant, O..
Morris & Poston No. 2.....	Morris & Poston Coal Co., Cleveland, O.	L. D. Poston, Mt. Pleasant, O..
Roby No. 3.....	Roby Coal Co., Cleveland, O.	W. L. Moke, Robyville, O.
Roby No. 4.....	Roby Coal Co., Cleveland, O.	W. L. Moke, Robyville, O.
Roby No. 5.....	Roby Coal Co., Cleveland, O.	W. L. Moke, Robyville, O.
O'Neils.....	O'Neil Coal Co., Adena, O.	J. S. O'Neil, Adena, O.
McFayden.....	Wayne Coal Co., Pittsburg, Pa.	D. G. Wise, Carmen, O.

HON. E. G. BIDDISON, *Chief Inspector of Mines*,
COLUMBUS, OHIO.

Esteemed Sir—

I respectfully submit to you my Fourth Annual Report of the Fifth Mining District composed of the counties of Coshocton, Guernsey, Tuscarawas, and have also been assigned the townships of Monroe of Muskingum County, Warren of Belmont, and Noble of Noble County, for a period of time covered between November 15, 1902, to November 15, 1903.

This has been a year of peace and prosperity in the mining industry in this section of the State, which has been stimulated by an unparalleled development of new mines and new coal fields. All new openings are equipped with the most modern machinery and ventilating apparatus evidences the fact that mining in this country has passed the experimental period, and all realize that good ventilation, good roads and good motive power are the three essentials that insure success in the coal business. Fans ranging from fifteen to eighteen feet in diameter are displacing the smaller ones, and furnaces which have outlived their usefulness during the period of acquiring the proper knowledge of practical mining, while removing the coal from drift mines where carbureted hydrogen gas was unknown.

Recent developments in southern Guernsey and Noble Counties pierce the coal measures by means of shafts ranging from one hundred and eighty to one hundred and ninety feet in depth. We find that the treacherous fire damp generates freely at this depth; with the exception of one instance, which occurred in the Walhonding mine in Guernsey County, where two lives were lost by the sudden flow of gas being suddenly and unexpectedly released by an extensive fall where pillars had been removed there has been no serious accidents from this enemy of the miner.

I would recommend that safety lamps be used in those mines adjacent to expected falls of large dimensions, as a safeguard against a sudden flow of gas, and all gas should be removed by the air current directed by breakthroughs or canvass brattice from the advanced workings. This method is generally practiced.

Many oil wells have been drilled through a portion of the coal field in Guernsey County and Noble. I have requested that they all be platted and located on the mine maps in order that the underground excavation can be kept a safe distance therefrom, and avoid the danger of tapping and permitting the gas to permeate the workings of the mine.

In Tuscarawas County, where they have shafted to the number six coal seam of coal, fire damp is visible, while the drift mines generate carbonic acid to such an extent that it is detrimental to good ventilation.

of the opinion that there should be a limit to the extent of excavation

that should be ventilated from one inlet and outlet in this seam of coal. When the refuse left in an old mine of this seam commences to decompose, and there is a general breaking up of the stratas, it appears to liberate quantities of carbonic acid gas when the velocity of air is increased, making it very unpleasant for all concerned.

Solid shooting is indispensable in some sections of my districts, and will be practiced until machine mining becomes general in the thin seams of coal. I consider this method of blasting one of the greatest dangers with which we have to contend, especially so at mines where the miner fires his own shot. Three secondary explosions occurred from powder smoke and seriously burned several miners; under my observation two miners lost their lives from flying coal from shots. Blasting commences with the last man on the return of air at fifteen minutes of four o'clock p. m. and they shoot in turn around to the inlet of air. Each miner being anxious to see daylight and home and family becomes nervous, the roar of shots is almost continuous until the last man has fired. The concussion of the blasts holds the air current at a standstill, and from fifty to one hundred shots fired in five minutes containing cartridges from four to seven feet in length, not only endangers the miner with flying debris but threatens a calamity in mines where coal dust is permitted to accumulate.

As a remedy for this condition of affairs I wish to suggest that two men be employed as shot firers whose duty it shall be to enter the mine after all the miners and mine laborers have gone home and fire the shots systematically allowing sufficient time to elapse between blasts to dilute the smoke and render it harmless.

Fatal accidents can be reduced to a minimum if all mine laborers will fully realize, and promptly guard against, lurking dangers, and pull down or post all loose stone, place their lamps aside when handling explosives, keep out of shearings when they are shattered by powder, and leave tacks under open ended shots while mining same. It is heart-rending to the Inspector in many instances while investigating an accident that has caused to be left a widow with a number of helpless children and to see how easily it could have been avoided.

If miners will determine, they will give the greatest care to the preservation of life and limb first, and produce coal in the meantime, in place of getting the coal out first, and caring for their lives afterwards; accidents will then be reduced to a minimum, and the remuneration for their labors should always afford them such privileges.

The mine foreman in employing men should acquaint them with existing rules and see to it that they are practiced thereafter.

During the entire year my official relations with operators and miners has been of the most pleasant character, and I wish to extend to you my sincere thanks for the valuable advice and many courtesies extended.

Respectfully submitted,

W. H. TURNER, Cambridge, Ohio.

Inspector of the Fifth Mining District.

FIFTH MINING DISTRICT.

W. H. TURNER, Inspector, Cambridge, Ohio.

COSHOCTON COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Conesville No 4.....	David Davis, Conesville, O.....	John Williams, Coshocton, O.....
Hay No. 2.....	Williams & Son, Coshocton, O.....	F. N. Barnes, Franklin Sta., O.....
Franklin East Side.....	Columbus Coal & Mining Co., Columbus, O.....	R. M. Mason, Coshocton, O.....
Cassingham No. 2.....	Drake Coal Co., Coshocton, O.....	R. M. Mason, Coshocton, O.....
Cassingham No. 3.....	Drake Coal Co., Coshocton, O.....	Thos. Williams, Coshocton, O.....
Conley No. 1.....	Thos. Williams & Son, Coshocton, O.....	L. B. Piper, Coshocton, O.....
Morgan Run No. 3.....	Morgan Run Coal Co., Cleveland, O.....	Jas. Perkins, Coshocton, O.....
Wade No. 2.....	Wade Coal Co., Cleveland, O.....	Jas. Perkins, Coshocton, O.....
Wade No. 3.....	Wade Coal Co., Cleveland, O.....	C. C. Hudson, Coshocton, O.....
Best.....	Best Coal Co., Franklin Station, O.....	H. A. Johnson, Coshocton, O.....
Hall.....	Wm. Hall, Franklin Station, O.....	
Arnold.....	Arnold Coal Co., Columbus, O.....	

SMALL MINES OF COSHOCTON COUNTY EMPLOYING LESS THAN TEN MEN.

Poland.....	Seth Poland, Isleta, O.....	
Orange No. 2.....	Ingham Bros., Coshocton, O.....	John Ingham, Coshocton, O.....
Lear.....	Henry Lear, Coshocton, O.....	
Hudson.....	Daniel Hudson, Coshocton, O.....	

GUERNSEY COUNTY.

Union.....	Toledo Coal & Coke Co., Toledo, O.....	W. R. Dixon, Birds Run, O.....
Old Orchard.....	Morris Coal Co., Cambridge, O.....	Wm. Langan, Danford, O.....
Kingston.....	Morris Coal Co., Cambridge, O.....	J. C. Kyte, Cambridge, O.....
Klondike.....	Loomis Moss Coal Co., Lore City, O.....	Harry Moss, Kipling, O.....
Black Top.....	J. H. Somers & Co., Cleveland, O.....	J. O. Somers, Cambridge, O.....
Indian Camp.....	Indian Camp Coal Co., Coshocton, O.....	J. W. Shaw, Birds Run, O.....
Little Kate.....	National Coal Co., Akron, O.....	Wm. Herbertson, Lucasville, O.....
Ideal.....	Wills Creek Coal Co., Detroit, Michigan.....	W. H. Davis, Byesville, O.....
Walwhounding.....	Wills Creek Coal Co., Detroit, Michigan.....	W. H. Davis, Byesville, O.....
Central.....	Wills Creek Coal Co., Detroit, Michigan.....	W. H. Davis, Byesville, O.....
Detroit.....	Wills Creek Coal Co., Detroit, Michigan.....	E. L. Donley, Ava, O.....
Cleveland, No. 1.....	Cambridge-Somers Coal Co., Cleveland, O.....	Mark Coe, Lore City, O.....
Leathernwood No. 1.....	Ohio & North Western Coal Co., Cambridge, O.....	Edw. Alexander, Cambridge, O.....
C. C. C.....	Ohio & Northwestern Coal Co., Cambridge, O.....	Edw. Alexander, Cambridge, O.....
Forsythe.....	Forsythe Coal Co., Danford, O.....	Homer Forsythe, Danford, O.....
Imperial.....	Imperial Mining Co., Cambridge, O.....	J. C. Orr, Byesville, O.....
Guernsey Brick.....	Guernsey Brick & Construction Co., Cambridge.....	Geo. Middleton, Byesville, O.....
Cisco.....	Opperman Coal Co., Cambridge, O.....	Thos. Richards, Pleasant City, O.....
Hazel.....	Opperman Coal Co., Cambridge, O.....	Thos. Richards, Pleasant City, O.....
Nicholson.....	Ohio Coal Co., Cambridge, O.....	D. E. Evans, Cambridge, O.....
Trial Run.....	Ellsworth Coal Co., Cleveland, O.....	Dennis Conroy, Robins, O.....
Murray Hill.....	Akron Coal Co., Akron, O.....	Wm. Rigby, Kipling, O.....
Hartford.....	Ellsworth Coal Co., Cleveland, O.....	Harry Cameron, Buffalo, O.....
Post Boy.....	Jno. T. Hirsch, Post Boy, O.....	George Ray, Post Boy, O.....
Pioneer No. 2 (abandoned) ..	Byesville Fuel Co., Byesville, O.....	Benj. Norris, Byesville, O.....

TUSCARAWAS COUNTY.

Goshen Hill.....	Goshen Hill Coal Co., Cleveland, C.....	Frank McIntosh, N. Phila. O.....
Baltic.....	C. A. Townsend Coal Co., Cleveland, O.....	L. C. Zollars, Cleveland, O.....
Beaver Dam No. 1.....	Beaver Dam Coal Co., Cleveland, O.....	O. L. Chalker, N. Phila. O.....
Beaver Dam No. 2.....	Beaver Dam Coal Co., Cleveland, O.....	O. L. Chalker, N. Phila. O.....
Novelty No. 2.....	Novelty Brick Co., New Comerstown, O.....	Frank Cotter, N. Comerstown, O.....
West Goshen.....	Cleveland, Tuscarawas Coal Co., Cleveland, O.....	R. M. Mason, Coshocton, O.....
Twin City.....	Dennison Coal Co., Dennison, O.....	J. B. Rammage, Dennison, O.....
Somerdale No. 2.....	Somerdale Coal Co., Somerdale, O.....	D. R. Jones, Somerdale, O.....
Buckhorn.....	George Markley, Mineral City, O.....	
Ace.....	George Markley, Mineral City, O.....	
Massillon Peacock.....	E. Van Kirk, Mineral City, O.....	John Punctureon, Mineral City, O.....
Huffs Run.....	Ridgeway, Burton Coal Co., Cleveland, O.....	Geo. Robson, Mineral City, O.....
Long Meadow.....	Ridgeway, Burton Coal Co., Cleveland, O.....	Alex. Lindsay, Mineral City, O.....
Huffs Run No. 2.....	Ridgeway, Burton Coal Co., Cleveland, O.....	Alex. Lindsay, Mineral City, O.....
Royal Coal No. 1.....	H. E. Cole, Midvale, O.....	H. E. Cole, Midvale, O.....

OH MINING DISTRICT.

W. H. TURNER, Inspector, Cambridge, Ohio.

COSHOCTON COUNTY.

Kind of Opening.	Mode of Ventilation.	No. of seam Penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad Connections.
Drift.....	Furnace....	6	4	Sin. & Double	.....	Conesville, O., P. C. C. & St. L.
Drift.....	Furnace....	6	4	Single.....	Mule.....	Coshocton, O., P. C. C. & St. L.
Drift.....	Furnace....	6	4	S. & D.....	Mule.....	Franklin Sta., O., P. C. C. & St. L.
Drift.....	Furnace....	6	4	Double.....	Motor.....	Coshocton, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	Motor.....	Coshocton, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Coshocton, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	Motor.....	Coshocton, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Coshocton, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Coshocton, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Conesville, O., P. C. C. & St. L.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Franklin Sta., O., P. C. C. & St. L.
Drift.....	Fan.....	6	4	Double.....	Motor.....	Conesville, O., W. & L. E.
Drift.....	Furnace....	6	4	Double.....	.....	Isletta, O.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Coshocton, O
Drift.....	Furnace....	6	4	Double.....	Mules.....	Coshocton, O
Drift.....	Furnace....	6	4	Double.....	Mules.....	Coshocton, O.
Drift.....	Furnace....	6	4	Double.....	Mule.....	Birds Run, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Motor.....	Danford, O., B. & O. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Motor.....	Lore City, O., B. & O.
Slope.....	Fan.....	7	5½	Double.....	Rope.....	Klondike, O., B. & O.
Shaft.....	Fan.....	7	5½	Double.....	Rope.....	Lore City, O., B. & O.
Shaft.....	Furnace....	6	4	Double.....	Mules.....	Birds Run, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Motor.....	Byesville, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Motor.....	Byesville, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Rope & Mot	Pleasant City, O.
Shaft.....	Fan.....	7	5½	Double.....	Rope.....	Byesville, O.
Shaft.....	Fan.....	7	6	Double.....	Mules.....	Ava, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Mules.....	Senecaaville, O., Eastern Ohio R. R.
Drift.....	Fan.....	7	5½	Double.....	Motor.....	Cambridge, O., B. & O.
Slope.....	Fan.....	7	5½	Double.....	Motor.....	Danford, O., B. & O. R. R.
Shaft.....	Fan.....	7	5½	Double.....	R. & Motor.	Derwent, O., Penna. R. R.
Drift.....	Furnace....	7	3½	Double.....	Mules.....	Byesville, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Motor.....	Pleasant City, O., Penna. R. R.
Shaft.....	Fan.....	7	6	Double.....	Mules.....	Blue Bell, O., Eastern Ohio.
Drift.....	Furnace....	7	5½	Double.....	Rope.....	Cambridge, O., Penna. R. R.
Shaft.....	Fan.....	7	5½	Double.....	Rope.....	Byesville, O., Penna. R. R.
Slope.....	Fan.....	7	5½	Double.....	Rope.....	Klondike, O., B. & O.
Shaft.....	Fans (2)....	7	6	Double.....	Motor.....	Hartford, O., Eastern Ohio R. R.
Drift.....	Furnace....	6	2½	Double.....	Mule.....	Post Boy, O., Penna. R. R.
Slope.....	Fan.....	7	5½	Double.....	Mules.....	Byesville, O.
Drift.....	Furnace....	6	4½	Double.....	Rope.....	Klondike, O., Penna. R. R.
Drift.....	Furnace....	5	3½	Double.....	Motor.....	Baltic, O., W. & L. E. R. R.
Shaft.....	Fan.....	6	4	Double.....	Mules.....	Klondike, O., Pa. R. R.
Shaft.....	Fan.....	6	4	Double.....	.....	Midvale, O., C. L. & W. R. R.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Newcomerstown, O., Pa. R. R.
Drift.....	Furnace....	6	4	Double.....	Rope.....	Joyce, O., Pa. R. R.
Drift.....	Furnace....	6	4	Double.....	.....	Dennison, O., Pa. R. R.
Drift.....	Furnace....	6	4	Double.....	Rope.....	Somerdale, O., W. & L. E. R. R.
Drift.....	Furnace....	6	2½	Double.....	Mules.....	Newcomerstown, O., Pa. R. R.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Mineral City, O., Valley R. R.
Drift.....	Furnace....	5	4	Double.....	Rope.....	Mineral City, O., Valley R. R.
Drift.....	Furnace....	5	4	Double.....	Rope.....	Mineral City, O., Valley R. R.
Drift.....	Furnace....	6	3½	Double.....	Mules.....	Valley Jct., O., Valley R. R.
Drift.....	Furnace....	5	3½	Double.....	Mules.....	Valley Jct., O., Valley R. R.
Drift.....	Furnace....	6	4	Double.....	Mules.....	Midvale, O., B. & O.

FIFTH MINING DISTRICT—Concluded.

TUSCARAWAS COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Royal Coal No. 2.....	H. E. Cole, Midvale, O.	H. E. Cole, Midvale, O.
Royal Coal No. 3.....	H. E. Cole, Midvale, O.	H. E. Cole, Midvale, O.
Center Valley.....	Massillon Tuscarawas Coal Co., Massillon, O.	R. W. Johns, Massillon, O.
Indian Hill.....	Hiawatha Coal Co., Toledo, O.	John Ronold, Uhrichsville, O.
South Side.....	C. E. Holden, Mineral City, O.	Geo. Ross, Uhrichsville, O.
Diamond Coal.....	American Clay Mfg. Co., Uhrichsville, O.	Geo. Ross, Uhrichsville, O.
Uhrichsville Coal.....	American Clay Mfg. Co., Uhrichsville, O.	Geo. Ross, Uhrichsville, O.
Midvale No. 2.....	Midvale Goshen Coal Co., Cleveland, O.	Frank McIntosh, N. Phila. O.
Goshen No. 2.....	Goshen Coal Co., New Phila., O.	Wm. Empfield, N. Phila. O.
East Goshen No. 1.....	East Goshen Coal Co., Cleveland, O.	Wm. Empfield, N. Phila. O.
East Goshen No. 2.....	East Goshen Coal Co., Cleveland, O.	Wm. Empfield, N. Phila. O.
Sugar Creek.....	Drake Coal Co., Cleveland, O.	R. M. Mason, Coshocton, O.
Midvale No. 4.....	Midvale-Goshen Coal Co., Cleveland, O.	Frank McIntosh, N. Phila. O.
Midvale No. 5.....	Midvale-Cleveland Coal Co., Cleveland, O.	Frank McIntosh, N. Phila. O.
New Castle.....	New Castle Coal Co., New Philadelphia, O.	J. S. Kollar, N. Phila. O.
Maple Grove.....	Schindler Bros., Tuscarawas, O.	H. A. Schindler, Tuscarawas, O.
Houk.....	American Sheet Steel Co., Canal Dover, O.	J. L. Houk, Stillwater, O.
Dennison (suspended).....	American Sheet Steel Co., Canal Dover, O.	Elmer Cline, Dennison, O.
Carbon Hill.....	Carbon Hill Coal Co., Uhrichsville, O.	Owen Donohoe, N. Phila. O.
Goshen Central.....	Goshen Central Coal Co., Massillon, O.	W. K. Moore, N. Phila. O.
Trenton.....	H. C. Minnich, Tuscarawas, O. ....	.....
Morey Ridge.....	J. C. Nungesser, Beidler, O. ....	.....
Aken.....	Stoner Coal Co., Akron, O.	J. P. Loomis, Akron, O.
North Goshen.....	J. E. Reeves, New Philadelphia, O.	Pritchard Clemens, N. Phila. O.
Goshen Shaft.....	Goshen Coal & Mining Co., Cleveland, O.	Wm. Penman, N. Phila. O.
Beaver.....	Eagle Coal & Mining Co., New Phila., O.	Ebenezer Jones, N. Phila. O.
Laughlin.....	Mineral City Coal Co., Mineral City, O.	J. J. Klein, Mineral City, O.
Briar Hill.....	Jos. Shilling, Canal Dover, O. ....	.....

NOBLE COUNTY.

Laura.....	Eastern Ohio Coal Co., Cleveland, O.	R. T. Price, Cleveland, O.
Belle Valley (new mine).....	Belle Valley Coal Co., Cleveland, O.	James Orr, Byesville, O.

BELMONT COUNTY.

Cochran.....	W. A. Werner Coal Co., Zanesville, O.	W. A. Werner, Zanesville, O.
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FIRE CLAY MINES OF TUSCARAWAS COUNTY. FIFTH DISTRICT.

Alma Clay.....	George Markley, Mineral City, O.
South Side Clay.....	C. E. Holden, Mineral City, O. ....	.....
Royal Clay No. 1.....	Royal Sewer Pipe & F. B. Co., Uhrichsville, O. ....	.....
Royal Clay No. 2.....	Royal Sewer Pipe & F. B. Co., Uhrichsville, O. ....	.....
Uhrichsville Clay.....	American Sewer Pipe Co., Uhrichsville, O.	Geo. Ross, Uhrichsville, O.
Paul Clay.....	Paul Clay Co., Massillon, O.	J. Paul, Massillon, O.
American Clay.....	American F. B. & C. Co., Mineral City, O.	Geo. Markley, Mineral City, O.
Dover Clay.....	Dover F. B. Co., Strasburg, O.	P. Arnold, Strasburg, O.
Diamond Clay.....	American Mfg. Co., Uhrichsville, O.	Geo. Ross, Uhrichsville, O.
Buckeye Clay.....	American Mfg. Co., Uhrichsville, O.	Harry Adamson, Uhrichsville, O.

FIFTH MINING DISTRICT—Concluded.

TUSCARAWAS COUNTY—Concluded.

Kind of Opening.	Mode of Ventilation.	No. of seams penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
rift.....	Furnace.....	6	4	Double.....	Mules....	Midvale, O., B. & O.
rift.....	Furnace.....	6	4	Double.....	Rope.....	Barn Hill, O., B. & O.
rift.....	Fan.....	6	4	Double.....	Rope.....	Newcumberland, O., W. & L. E.
rift.....	Fan.....	6	4	Double.....	Rope.....	Uhrichsville, O., Pa. R. R.
rift.....	Furnace.....	5	4	Double.....	Mules....	Mineral City, O., Valley R. R.
rift.....	Furnace.....	6	4	Double.....	Mules....	Uhrichsville, O.
rift.....	Furnace.....	6	4	Double.....	Mules....	Uhrichsville, O.
rift.....	Furnace.....	6	4	Double.....	Mules....	Barn Hill, O.
rift.....	Furnace.....	6	4	Double.....	Rope.....	Beidler, O., C. L. & W. R. R.
rift.....	Furnace.....	6	4	Double.....	Rope.....	Near New Phila., O., C. & P.
lofe.....	Fan.....	5	4	Double.....	Motor....	Near New Phila., O., C. & P.
lofe.....	Furnace.....	5	3½	Double.....	Rope.....	Sugar Creek O., W. & L. E.
rift.....	Furnace.....	6	4	Double.....	Rope.....	Wainwright, O., B. & O.
lofe.....	Fan.....	6	4	Double.....	Rope.....	Wainwright, O., B. & O.
rift.....	Furnace.....	6	4	Double.....	Mules....	New Phila., O., Ohio Canal.
rift.....	Furnace.....	6	4	Double.....	Mules....	Uhrichsville, O.
rift.....	Fan.....	7	5	Double.....	Motor....	Stillwater, O., B. & O.
rift.....	Furnace.....	6	4	Double.....	Mules....	Dennison, O., Pa. R. R.
rift.....	Furnace.....	6	3½	Double.....	Mules....	Newport, O., B. & O.
rift.....	Furnace.....	6	4	Double.....	Mules....	New Phila., O., C. & P.
rift.....	Furnace.....	6	4	Double.....	Mules....	Trenton, O., Ohio Canal.
rift.....	Furnace.....	6	4	Double.....	Mules....	Beidler, O., B. & O.
lofe.....	Furnace.....	6	4	Double.....	Rope.....	Mineral City, O., Valley R. R.
rift.....	Natural.....	6	4	Double.....	Mules....	Near New Phila., O., C. & P.
haft.....	Fan.....	6	4	Double.....	Mules....	Near New Phila., O., C. & P.
rift.....	Furnace.....	6	4	Double.....	Mules....	New Phila., O.
rift.....	Furnace.....	6	4	Double.....	Rope.....	Mineral City, O.
rift.....	Furnace.....	6	4	Double.....	Rope.....	Zoar Sta., O., Ohio Canal,
haft.....	Fan.....	7	4	Double.....	Mules....	Belle Valley, O., Pa. R. R.
rift.....	Furnace.....	8	4½	Double.....	Mules....	Quaker City, O., B. & O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Near Mineral City, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Near Mineral City, O.
rift.....	Fan.....	5	8	Double.....	Mule.....	Near Midvale, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Near Midvale, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Uhrichsville, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Near Newport, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	New Strasburgh, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Uhrichsville, O.
rift.....	Furnace.....	5	8	Double.....	Mule.....	Uhrichsville, O.

HON. E. G. BIDDISON, *Chief Inspector of Mines,*

COLUMBUS, OHIO.

Dear Sir—

In compliance with the custom of the Mining Department, I herewith submit to you my annual report of the visits made, scales tested, improvements ordered, the number of fatal accidents, etc. You will also find in the tables of the annual report the number of new mines opened up, the ones that were suspended during the year and the number that were either abandoned or worked out. This district is comprised of the counties of Carroll, Columbiana, Mahoning, Trumbull, the northern portion of Jefferson and two mines located in Tuscarawas County.

Indischarging the duties of District Mine Inspector I have visited the mines under my jurisdiction as often as time and the duties of the office permitted. With but few exceptions the mines in this district are in good condition. All of the large mines, and a number of the smaller ones, are equipped with electrical machinery and up-to-date devices for handling and mining coal. The use of the furnace for ventilating purposes is scarcely ever encountered, it having been discarded for the fan which give almost universal satisfaction and is more economical than furnace ventilation.

I have made two hundred and thirty-nine visits to the mines during the year and tested twenty-three sets of scales. With few exceptions the mines in this district have been in operation during the entire year, and generally speaking would say that the conditions of mining have been good. It is with regret that I am compelled to report eleven fatal accidents which occurred in various ways during the year that has just closed.

On September 21st, I was called to the La Belle shaft mine located at Steubenville, Ohio, on account of a gas explosion where nine men were severely burned, two of which resulted fatally. Assisted by Thomas McGough, Inspector for the Fourth Mining District, a careful investigation was made, proving to our satisfaction that a miner had been guilty of opening his safety lamp thus igniting the gas which was the cause of the explosion. The lamp in use at that time was condemned and replaced with a lamp locked by a magnet when given to the miner.

On October 31st, I was called to the Big Walnut mine located in Columbiana County on account of an explosion. After making an inspection of this mine I found that there had been what is called a smoke explosion. About sixty men were employed at this mine, and the coal is mined entirely by the use of powder, each miner using from two

to four feet of powder in each drill hole. The shots are fired with a fuse, each miner giving himself time enough to get at a safe distance away. At this particular time it appears that all the shots in the mine were fired at the same time causing the smoke to ignite resulting in an explosion. We are glad to report that no one was very seriously injured, but to avert any further danger that might occur in the future shot firers were put on which has proved very satisfactory.

In regard to fatal accidents will say that a large per cent. are due to carelessness on the part of the miner. A great number of the miners are foreigners, and as such are not practical miners, and therefore do not realize the danger encountered in the mines. This class of men especially should receive more than ordinary attention from the mine foreman in giving instructions to them in order to have the proper regard for their own lives and for the safety of others.

In conclusion will say that I desire to extend my thanks to you for the many courtesies and advice rendered in the discharge of my duties.

Respectfully yours,

JAS. P. DAVIS, Salem, Ohio.

Inspector of the Sixth Mining District.

SIXTH MINING DISTRICT.

JAMES P. DAVIS, Inspector, Salem, Ohio.

CARROLL COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Linden No. 6	Davis R. R. Coal Co., Canton, O.	J. J. Evans, Lindentree, O.
Magnolia	Magnolia Coal Co., Magnolia, O.	J. J. Dagenhard, Magnolia, O.
Somers No. 2	Somers Mining Co., Cleveland, O.	Wm. Maloney, Sherrodsville, O.
Somers No. 3	Somers Mining Co., Cleveland, O.	Wm. Maloney, Sherrodsville, O.
Heatherington No. 3	Somers Mining Co., Cleveland, O.	Jno. Hileman, Washingtonville, O.
Van Kirk No. 5	Van Kirk Mining Co., Mineral City, O.	John Myers, Mineral City, O.
Malvern	Malvern F. C. Co., Malvern, O.	John Fisher, Malvern, O.
Beatty No. 2	National Fire Proofing Co., Magnolia, O.	H. Kessler, Magnolia, O.
Ebersole	John Ebersole, Carrollton, O.	
Minerva	Minerva Fire Clay Co., Minerva, O.	A. Curry, Minerva, O.
Cherry Hill	J. H. Miller & Co., Minerva, O.	
Pearch	C. Pearch, Sherrodsville, O.	
Justus	D. S. Maughman, Sherrodsville, O.	
Sharp	Samuel Sharp, Sherrodsville, O.	
Richeson	A. Richeson, Sherrodsville, O.	
Baker	W. Rutter, Leesville, O.	
Sandy Valley Clay	Robinson Clay Product Co., Akron, O.	N. A. Lewton

COLUMBIANA COUNTY.

New Shaft	Big Vein Coal Co., Cleveland, O.	E. J. Marshall, Lisbon, O.
Cedar Hill	Big Vein Coal Co., Cleveland, O.	E. J. Marshall, Lisbon, O.
Slope No. 1	O. & P. Coal Co., Cleveland, O.	James Black, Salineville, O.
Slope No. 2	O. & P. Coal Co., Cleveland, O.	James Black, Salineville, O.
Strabley	James S. Strabley, Salineville, O.	
Salisbury	Norris Mining & Mfg Co., Pittsburgh, Pa.	R. T. Davis, Salisbury, O.
Kirk	Kirk & Deveny, Salineville, O.	H. H. Kirk, Salineville, O.
Salem Shaft	Salem Mining Co., Salem, O.	Wm. Dunn, Salem, O.
Fairfield No. 2	Fairfield Coal Co., Wooster, O.	Thos. D. Sutherin, N. Waterford, O.
Peerless	Townsend Coal Co., Cleveland, O.	C. A. Townsend, Cleveland, O.
Big Walnut	Peerless Coal Co., Cleveland, O.	I. N. Russell, Salem, O.
Cherry Valley	Cherry Valley Iron Works, Leetonia, O.	E. M. Peters, Leetonia, O.
Pine Hill	Card & Prosser, Lisbon, O.	Thos. Prosser, Lisbon, O.
Prosser No. 4	Card & Prosser, Lisbon, O.	Thos. Prosser, Lisbon, O.
Lisbon	Lisbon Coal Co., Lisbon, O.	E. J. Marshall, Lisbon, O.
New House	Herriott Coal Co., Elkton, O.	C. C. Herriott, Elkton, O.
Pleasant Valley No. 6	Powers Mining Co., Negley, O.	E. W. Powers, Negley, O.
Pleasant Valley No. 7	Powers Mining Co., Negley, O.	E. W. Powers, Negley, O.
Leetonia	Leetonia Coal Co., Leetonia, O.	Mout Stouffer, Leetonia, O.
Prospect Hill No. 2	Prospect Hill Coal Co., East Palestine, O.	Grant Hill, E. Palestine, O.
State Line	National Fire Proofing Co., E. Palestine, O.	Hugh Laughlin, E. Palestine, O.
State Line No. 2	National Fire Proofing Co., E. Palestine, O.	Hugh Laughlin, E. Palestine, O.
McNab	McNab Coal Co., Salem, O.	Jno. T. Reese, Salem, O.
Farquhar	Lemmon Coal Co., Salem, O.	A. H. Lemmon, Salem, O.

SMALL MINES.

Pine Hollow	Pine Hollow Coal Co., Salem, O.	Jas. Ashman, Salem, O.
Wheat Hill	Wheat Hill Coal Co., East Palestine, O.	Jas. Fleming, E. Palestine, O.
McMillen	R. McMillen, E. Palestine, O.	
Sears	Jas. Leeper, Salem, O.	
Bonsall	Auld & Son, Salem, O.	
Beech Ridge	Joe Shriver, Salem, O.	
Shepherd	Jesse Shriver, Salem, O.	
Neiheisel	Neiheisel Bros., Leetonia, O.	
Booth	A. K. McMillen, Negley, O.	
Sheen Shaft	Jas. Sheen, Salem, O.	
Howell	C. Howell, Salem, O.	

H MINING DISTRICT.

JAMES P. DAVIS, Inspector, Salem, Ohio.

CARROLL COUNTY.

Kind of Opening.	Mode of Ventilation.	No of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
rift.....	Fan.....	6	3 ft 8 in	Double.....	Rope.....	Near Mineral Pt., Valley R. R.
haft.....	Fan.....	5	4	Double.....	Mule.....	Magnolia, O., Valley R. R.
haft.....	Fan.....	6	4½	Double.....	Motor.....	Sherrodsville, O., W. & L. E.
haft.....	Fan.....	6	4½	Double.....	Mule.....	Sherrodsville, O., W. & L. E.
rift.....	Fan.....	8 V	3	Single.....	Motor.....	Salineville, O., C. & P. R. R.
rift.....	Furnace.....	7	4½	Double.....	Mule.....	Sherrodsville, O., W. & L. E. R. R.
rift.....	Furnace.....	7	5	Single.....		
rift.....	Furnace.....	7	2½			
lope.....	Fan.....	5	3			
lope.....	Furnace.....	5	2½			
rift.....	Natural.....	7	4			
rift.....	Natural.....	7	4			
rift.....	Natural.....	7	5			
rift.....	Natural.....	7	4½			
haft.....	Fan.....	7	5	Double.....	Rope.....	Salineville, O., C. & P. R. R.
rift.....	Fan.....	7	4½	Double.....	Rope.....	Salineville, O., C. & P. R. R.
lope.....	Fan.....	7	5½	Double.....	Motor.....	Salineville, O., C. & P. R. R.
lope.....	Fan.....	7	4½	Double.....	Motor.....	Salineville, O., C. & P. R. R.
rift.....	Fan.....	7	4½	Double.....	Mule.....	Salineville, O., C. & P. R. R.
rift.....	Fan.....	7	3ft 10 in	Double.....	Mule.....	Salineville, O., C. & P. R. R.
rift.....	Furnace.....	8 V	2ft 10 in	Single.....	Mule.....	Salineville, O., C. & P. R. R.
rift.....	Fan.....	3	3½	Single.....	Mule.....	Salem, O.
rift.....	Fan.....	6	3½	Single.....	Rope.....	N. Waterford, O., P. Ft. W. & C.
lope.....	Fan.....	3	3	Single.....	Rope.....	Salem, O.
lope.....	Fan.....	3	3 ft 4 in	Single.....	Rope.....	Salem, O.
lope.....	Fan.....	3	3½	Single.....	Rope.....	Washingtonville, O., Erie R. R.
haft.....	Fan.....	3	3½	Single.....	Mule.....	Lisbon, O., Erie R. R.
rift.....	Fan.....	6	2½	Single.....	Mule.....	Lisbon, O., Erie R. R.
rift.....	Fan.....	3	3½	Single.....	Rope.....	Lisbon, O., Erie R. R.
rift.....	Furnace.....	6	3	Single.....	Rope.....	Elkton, O., P. L. & W. R. R.
rift.....	Furnace.....	6	3½	Single.....	Rope.....	Negley, O., P. L. & W. R. R.
rift.....	Furnace.....	6	3½	Single.....	Rope.....	Negley, O., P. L. & W. R. R.
lope.....	Fan.....	3	3 ft 4 in	Single.....	Rope.....	Leetonia, O., P. Ft. W. & C. R. R.
lope.....	Fan.....	6	3 ft 10 in	Single.....	Rope.....	E. Palestine, O., P. Ft. W. & C.
rift.....	Fan.....	6	4	Single.....	Rope.....	E. Palestine, O., P. Ft. W. & C.
rift.....	Fan.....	7	2½	Single.....	Rope.....	E. Palestine, O., P. Ft. W. & C.
haft.....	Fan.....	3	3½	Single.....	Mule.....	Salem, O.
haft.....	Steam Ex.....	3	3½	Single.....	Mule.....	Salem, O.
rift.....	Furnace.....	3	3½	Single.....	Rope.....	Salem, O.
rift.....	Furnace.....	6	4	Single.....	Mule.....	East Palestine, O.
rift.....	Furnace.....	6	3½	Single.....	Mule.....	East Palestine, O.
rift.....	Furnace.....	3	3	Single.....	Mule.....	Salem, O.
rift.....	Furnace.....	3	2 ft 9 in	Single.....	Mule.....	Salem, O.
rift.....	Furnace.....	3	3	Single.....	Mule.....	Salem, O.
rift.....	Furnace.....	3	3	Single.....	Mule.....	Salem, O.
rift.....	Furnace.....	3	2 ft 9 in	Single.....	Mule.....	Salem, O.
rift.....	Furnace.....	6	3 ft 4 in	Single.....	Mule.....	Negley, O.
haft.....	Natural.....	3	3	Single.....	Mule.....	Salem, O.
rift.....	Natural.....	3	2 ft 9 in	Single.....	Mule.....	Salem, O.

SIXTH MINING DISTRICT—Concluded.

JEFFERSON COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Jumbo.....	Salisbury Coal Co., Columbus, O.....	Albert Thorp, Bergholz, O.....
United States No. 1.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 2.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 3.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 4.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 5.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 6.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 7.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 8.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 9.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
United States No. 10.....	United States Coal Co., Dillonvale, O.....	E. W. Robison, Dillonvale, O.....
Brilliant.....	Pan Handle Coal Co., Brilliant, O.....	L. R. Howell, Brilliant, O.....
La Belle.....	LaBelle Iron Works, Steubenville, O.....	W. G. Duncan, Steubenville, O.....
High Shaft.....	Steubenville Mining Co., Steubenville, O.....	Wm. Smurthwaite, Steubenville, O.....
Rolling Mill No. 2.....	Irondale Mining Co., Irondale, O.....	K. Head, Irondale, O.....
Taylor.....	Wm. Taylor & Son, Bergholz, O.....	Wm. Taylor, Bergholz, O.....
X. L.....	Jno. Kirk & Co., Bergholz, O.....	Jno. Kirk, Bergholz, O.....
West Pittsburg.....	Eastern Ohio Coal Co., Cleveland, O.....	R. T. Price, Cleveland, O.....
Zerbe.....	O. & P. Coal Co., Cleveland, O.....	W. A. Woodward, Amsterdam, O.....
Amsterdam.....	Amsterdam Coal Co., Cleveland, O.....	Ed. Hite, Amsterdam, O.....
Jefferson No. 1.....	Jefferson Coal Co., Cleveland, O.....	Jno. Simpson, Piney Fork, O.....
Jefferson No. 2.....	Jefferson Coal Co., Cleveland, O.....	Jno. Simpson, Piney Fork, O.....

MAHONING COUNTY.

McKinley.....	Lake Erie & Southern Coal Co., Cleveland, O.....	W. B. Myers, Beloit, O.....
Fairview No. 3.....	Ohio Coal & Clay Co., Washingtonville, O.....	Jno. Hileman, Washingtonville, O.....
National.....	National Coal & Clay Co., Washingtonville, O.....	S. W. Stouffer, Washingtonville, O.....
Greenamyer.....	Zimmerman & Orr, Salem, O.....	Geo. Orr, Salem, O.....
Evans.....	Evans Block Coal Co., Youngstown, O.....	.....
Chestnut Hill.....	Ferrell & Rider, Youngstown, O.....	.....

PORTAGE COUNTY.

Hutson No. 4.....	Hutson Coal Co., Lloyd, O.....	T. J. Williams, Lloyd, O.....
Hutson No. 6.....	Hutson Coal Co., Lloyd, O.....	T. J. Williams, Lloyd, O.....
Mullin Shaft.....	South Palmyra Coal Co., Wooster, O.....	John Davis, Deerfield, O.....

TRUMBULL COUNTY.

Keel Ridge.....	Witch Hazel Coal Co., Youngstown, O.....	W. J. Sampson, Youngstown, O.....
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SIXTH MINING DISTRICT—Concluded.

JEFFERSON COUNTY.

employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
8	...	Drift.....	Fan.....	7	4	Double....	Motor.....	Bergholz, O., L. E. A. & W. R. R.
0	5	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
0	8	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
0	5	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
0	5	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
6	2	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
0	7	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
4	8	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
8	9	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
0	10	Drift.....	Furnace....	8	5½	Double....	Motor.....	Dillonvale, O., W. & L. E.
6	24	Shaft.....	Fan.....	6	5	Double....	Motor.....	Brilliant, O., C. & P. R. R.
4	13	Shaft.....	Fan.....	6	3 ft 10 in	Double....	Mule.....	Steubenville, O., C. & P. R. R.
8	52	Shaft.....	Fan.....	6	3 ft 8 in	Double....	Motor.....	Steubenville, O., P. C. C. & St. L.
3	8	Drift.....	Furnace....	7	4½	Single.....	Mule.....	Irondale, O., C. & P. R. R.
...	...	Drift.....	Furnace....	5	3 ft 8 in	Single.....	Mule.....	Bergholz, O., L. E. A. & W. R. R.
...	...	Slope.....	Fan.....	5	2½	Single.....	Rope.....	Bergholz, O., L. E. A. & W.
...	...	Slope.....	Fan.....	6A	5½	Double....	Motor.....	Bergholz, O., L. E. A. & W.
...	...	Shaft.....	Fan.....	6A	5½	Double....	Mule.....	Bergholz, O., L. E. A. & W.
...	...	Shaft.....	Fan.....	6A	5½	Double....	Mule.....	Bergholz, O., L. E. A. & W.
...	...	Drift.....	Fan.....	8	5½	Double....	Mule.....	Bergholz, O., L. E. A. & W.
...	...	Drift.....	Fan.....	8	5½	Double....	Mule.....	Bergholz, O., L. E. A. & W.
3	9	Shaft.....	Fan.....	3	3 to 4 ft	Single.....	Mule.....	Beloit, O., P. Ft. W. & C. R. R.
9	16	Slope.....	Fan.....	3	2 ft 10 in	Single.....	Mule.....	Washingtonville, O., Erie R. R.
9	16	Shaft.....	Fan.....	3	3	Single.....	Mule.....	Washingtonville, O., Erie R. R.
7	2	Shaft.....	Fan.....	3	3	Single.....	Mule.....	Salem, O.
8	3	Shaft.....	Natural....	3A	3½	Single.....	Mule.....	Youngstown, O.
5	2	Shaft.....	Furnace....	3A	3½	Single.....	Mule.....	Youngstown, O.
3	34	Shaft.....	Fan.....	1	4½	Single.....	Mule.....	Deerfield, O., L. E. A. & W. R. R.
6	22	Shaft.....	Fan.....	1	4½	Single.....	Mule.....	Deerfield, O., L. E. A. & W.
3	14	Shaft.....	Steam Ex...	1	4½	Single.....	Mule.....	Deerfield, O.
5	3	Drift.....	Furnace....	5	3 ft 10 in	Single.....	Mule.....	Youngstown, O., L. S. & M. S.

HON. E. G. BIDDISON, *Chief Inspector of Mines,*

COLUMBUS, OHIO.

Dear Sir—

The report of the Seventh Mining District, composed of the counties of Holmes, Medina, Stark, Summit, Ottawa and Wayne, is herewith submitted to you covering the period from November 15, 1902 to November 15, 1903.

During this last inspection year work throughout the district has been somewhat better than the preceding one. This was possibly somewhat due to a strike in the anthracite region of Pennsylvania, thus increasing the demand for other grades of coal of which it is only fair to presume that this district secured its share of this increased demand.

What is known as the original Massillon district suffered somewhat from a scarcity of cars; however, the average number of days worked was about one hundred and ninety for the inspection year.

As a rule the mines of Medina County, which furnishes fuel for railroads, worked steadily, while others which are operated mainly to supply the domestic trade, furnished employment for a number of men during the winter months, in consequence of which the number of days worked is dependent upon the domestic demand and the severity of the weather.

The mines of Holmes County are all of the domestic class and employ the greatest number of men during the winter months, and like all other domestic mines increase or decrease the output of coal and the number of men employed according to the demands of the trade. As a rule these mines do not employ many men. During my inspections there I found some mines ventilated by a furnace, and others by natural ventilation. As a whole they were all in fairly good condition for small domestic mines.

In compliance with instructions received from the Mining Department, I inspected the Gypsum mines located at Port Clinton, Ottawa County. These mines are owned and operated by the United States Gypsum Co., Chicago, Illinois, with E. J. Hughes, in general charge of the mines. They are known as the Lee, Port Clinton and Bessie. The Lee mine employs sixty miners and seven day hands, and is equipped with modern machinery. It is lighted by electricity and has an electric hoist. The mine is a shaft opening about forty feet deep. The other two openings are located near each other, recently opened up and employ but few men. The vein in which these mines are located varies in thickness from four to eight feet. Dynamite is used for blasting purposes. During the inspection year two hundred and forty-five (245) visits were made.

No strikes or lockouts of any importance occurred. Five fatal accidents occurred in the mines of this district during the year. No explosions of gas or powder occurred during the year, but one due to smoke was reported on July 2, at the Minglewood mine number two. The coal became ignited and burned for a short time. Being discovered it was extinguished before doing any material damage.

In conclusion permit me to say that with present conditions, the prompt action on the part of companies for necessary improvements as conditions may require in the future, and with the necessary care and good judgment used by miners in the past, the destruction of property to the mine owner and the loss of life and limb to the miner can be reduced to the minimum.

Very respectfully yours,

W. H. MILLER, Massillon, Ohio.

Inspector Seventh Mining District.

SEVENTH MINING DISTRICT.

W. H. MILLER, Inspector, R. F. D. No. 1, Massillon O.

HOLMES COUNTY.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
Uhl.....	Uhl & Fortune, Killbuck, O.....	B. M. Fortune, Killbuck, O.....
Horn.....	Jno. Horn, Millersburgh, O.....	.....
Quillian.....	G. C. Quillian, Killbuck, O.....	.....
Mast.....	M. Marquis, Homesville, O.....	.....
Bilderback.....	B. M. Bilderback, Millersburg, O.....	.....
Lookout.....	W. H. Gindlesburgher, Millersburgh, O.....	.....
Jordan.....	Jordan & Carpenter, Millersburgh, O.....	.....

MEDINA COUNTY.

Card Slope No. 2.....	Card Coal Co., Cleveland, O.....	O. V. Dibble, Wadsworth, O.....
Card Slope No. 5.....	Card Coal Co., Cleveland, O.....	O. V. Dibble, Wadsworth, O.....
Whelan No. 2.....	Card Coal Co., Cleveland, O.....	O. V. Dibble, Wadsworth, O.....
Easter.....	Silver Creek Coal Co., Wadsworth, O.....	Richard Allen, Wadsworth, O.....
Wagoners.....	Excelsior Coal Co., Akron, O.....	D. Golden, Wadsworth, O.....
James No. 4.....	James & Paynter, Wadsworth, O.....	Thos. James, Wadsworth, O.....
Wayne No. 2.....	Ohio Salt Co., Wadsworth, O.....	C. Evans, Wadsworth, O.....
Klondike.....	Hutchinson Coal Co., Wadsworth, O.....	John Hutchinson, Wadsworth, O.....
Hamilton.....	Cunningham Coal Co., Wadsworth, O.....	G. Hamilton, Wadsworth, O.....

OTTAWA COUNTY.

Port Clinton.....	U. S. Gypsum Co. Chicago, Ill.....	E. J. Hughes, Gypsum, O.....
Beasie.....	U. S. Gypsum Co., Chicago, Ill.....	E. J. Hughes, Gypsum, O.....
Lea.....	U. S. Gypsum, Co., Chicago, Ill.....	E. J. Hughes, Gypsum, O.....

STARK COUNTY.

Minglewood No. 1.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Minglewood No. 2.....	Massillon Coal Mining Co., Massillon, O.....	T. F. Geltz, Massillon, O.....
New Greenville No. 3.....	Massillon Coal Mining Co., Massillon, O.....	T. F. Geltz, Massillon, O.....
Warwick No. 4.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Warwick No. 5.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Central No. 7.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Stanwood No. 8.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
North Massillon No. 9.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Crookston, Massillon, O.....
Fox No. 12.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Geise No. 13.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Baumgardner, Massillon, O.....
Canal Fulton No. 15.....	Massillon Coal Mining Co., Massillon, O.....	T. F. Geltz, Massillon, O.....
Oakwood No. 16.....	Massillon Coal Mining Co., Massillon, O.....	T. F. Geltz, Massillon, O.....
No. 17.....	Massillon Coal Mining Co., Massillon, O.....	T. F. Geltz, Massillon, O.....
Stark No. 1.....	Massillon Elm Run Coal Co., Massillon, O.....	J. L. Green, Massillon, O.....
Elm Run No. 2.....	Massillon Elm Run Coal Co., Canton, O.....	Louis Brenkamp, Massillon, O.....
Elm Run No. 3.....	Massillon Elm Run Coal Co., Canton, O.....	Louis Brenkamp, Massillon, O.....
Elm Run No. 4.....	Massillon Elm Run Coal Co., Canton, O.....	Louis Brenkamp, Massillon, O.....
Elm Run No. 5.....	Massillon Elm Run Coal Co., Canton, O.....	Louis Brenkamp, Massillon, O.....
Elm Run No. 6.....	Massillon Elm Run Coal Co., Canton, O.....	H. Williams, R. F. R. Navarre, O.....
Pocock No. 3.....	J. F. Pocock, Massillon, O.....	C. A. Kouth, Massillon, O.....
Summit Hill.....	L. E. Smith, Greentown, O.....	.....
Camp.....	H. B. Camp, Akron, O.....	.....
North Berlin.....	A. Smith, New Berlin, O.....	.....
Carr.....	A. C. Dustman, Alliance, O.....	.....
Pleasant Valley.....	Pleasant Valley Coal Co., Alliance, O.....	Dell Birch, Myers, O.....
Crescent.....	Crescent Coal Co., Alliance, O.....	G. W. Henry, Alliance, O.....
Indian Run.....	Indian Run Coal Co., Canton, O.....	D. Carroll, Osnaburgh, O.....
McGinty.....	Louisville Brick & Tile Co., Louisville, O.....	Edw. Jones, Louisville, O.....
Pigeon Run.....	Pigeon Run Coal Co., Cleveland, O.....	J. Burgar, Massillon, O.....
Sherwood.....	Livers & Smith, R. F. D., No. 1, Massillon, O.....	C. F. Smith, Massillon, O.....
White Oak.....	White Oak Coal Co., Cleveland, O.....	H. Williams, Canal Fulton, O.....
Eureka.....	Massillon-Cleveland Coal Co., Cleveland, O.....	A. Brenkamp, Massillon, O.....
Woodland.....	Massillon-Cleveland Coal Co., Cleveland, O.....	D. R. Jones, East Greenville, O.....
Cassingham.....	Cassingham Coal Co., Cleveland, O.....	J. F. Kellar, Massillon, O.....

SEVENTH MINING DISTRICT.

W. H. MILLER, Inspector, R. F. D. No. 1, Massillon, O

HOLMES COUNTY.

No. of miners employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
8	1	Drift.....	Furnace.....	6	3	Single.....		
6	1	Drift.....	Natural.....	6	3	Single.....		
10	2	Drift.....	Furnace.....	6	3	Single.....	Mule.....	
12	3	Drift.....	Furnace.....	6	3	Single.....	Mule.....	
10	2	Drift.....	Furnace.....	6	3	Single.....		
9	1	Drift.....	Furnace.....	6	3	Single.....		
10	1	Drift.....	Natural.....	6	3	Single.....		
30	10	Slope.....	Furnace.....	1	4	Double.....	Mule.....	Wadsworth, O., Erie R. R.
35	9	Slope.....	Ex. Steam.....	1	5	Double.....	Mule.....	Wadsworth, O., Erie R. R.
65	18	Slope.....	Ex. Steam.....	1	4	Double.....	Mule.....	Wadsworth, O., Erie R. R.
34	12	Slope.....	Ex. Steam.....	1	4	Double.....	Mule.....	Wadsworth, O., Erie R. R.
28	12	Slope.....	Ex. Steam.....	1	4	Double.....	Mule.....	Wadsworth, O., Erie R. R.
7	3	Slope.....	Ex. Steam.....	1	4	Double.....	Mule.....	Wadsworth, O., Erie R. R.
11	2	Slope.....	Ex. Steam.....	1	4	Single.....	Mule.....	Wadsworth, O., Erie R. R.
9	2	Slope.....	Furnace.....	1	4	Single.....	Mule.....	Wadsworth, O., Erie R. R.
11	2	Drift.....	Furnace.....	1	3	Single.....	Mule.....	Wadsworth, O., Erie R. R.
41	12	Drift.....	Steam Ex.....	Gp.	5	Single.....	Mule.....	Gypsum, O., L. S. & M. S.
6	18	Drift.....	Steam Ex.....	Gp.	5	Single.....	Mule.....	Gypsum, O., L. S. & M. S.
33	18	Shaft.....	Steam Ex.....	Gp.	6	Single.....	Mule.....	Gypsum, O., L. S. & M. S.
66	36	Shaft.....	Fan.....	1	5	Double.....	Mule.....	North Lawrence, O., P. Ft. W. & C.
62	40	Shaft.....	Fan.....	1	5	Double.....	Motor & Mule	N. Lawrence, O., P. Ft. W. & C.
81	38	Shaft.....	Fan.....	1	5	Double.....	Gas & Mule	E. Greenville, O., W. & L. E.
28	15	Shaft.....	Fan.....	1	5	Double.....	Gas & Mule	Bentley, O.
29	15	Shaft.....	Fan.....	1	4	Double.....	Gas & Mule	Bentley, O.
50	20	Shaft.....	Fan.....	1	5	Double.....	Gas & Mule	W. Brookfield, O., W. & L. E.
48	22	Shaft.....	Fan.....	1	6	Double.....	Gas & Mule	Stanwood, O., B. & O.
85	32	Shaft.....	Fan.....	1	4	Double.....	Mule.....	
59	17	Shaft.....	Fan.....	1	5	Double.....	Mule.....	Navarro, O., B. & O.
33	19	Shaft.....	Fan.....	1	5	Double.....	Mule.....	Stanwood, O.
64	21	Shaft.....	Fan.....	1	5	Double.....	Mule.....	Canal Fulton, O., B. & O.
55	24	Shaft.....	Fan.....	1	4	Double.....	Mule.....	Crystal Springs, B. & O. & P. Ft. & C.
19	13	Shaft.....	Steam Ex.....	Gp.	5	Double.....	Mule.....	Brookfield, O., W. & L. E. R. R.
43	14	Shaft.....	Fan.....	1	4	Double.....	Mule.....	Pigeon Run, O.
14	13	Shaft.....	Fan.....	1	4	Double.....	Mule.....	W. Brookfield, O.
20	14	Shaft.....	Fan.....	1	4	Double.....	Mule.....	Elton, O., B. & O.
33	12	Shaft.....	Fan.....	1	5	Double.....	Mule.....	Elton, O., B. & O.
14	13	Shaft.....	Fan.....	1	5	Double.....	Mule.....	Elton, O., B. & O.
12	10	Shaft.....	Steam Ex.....	Gp.	4	Double.....	Mule.....	E. Greenville, O., W. & L. E.
115	26	Shaft.....	Fan.....	4	5	Double.....	Mule.....	W. & L. E. & B. & O.
15	3	Drift.....	Furnace.....	4	5	Single.....	Mule.....	Greentown, O., B. & O.
10	2	Drift.....	Natural.....	4	5	Single.....	Mule.....	Greentown, O.
7	2	Shaft.....	Ex. Steam.....	4	5	Single.....	Mule.....	New Berlin, O.
15	2	Shaft.....	Furnace.....	6	3	Single.....	Mule.....	Alliance, O.
11	4	Drift.....	Furnace.....	6	3	Single.....	Mule.....	Paris, O., L. E. A. & W.
23	7	Slope.....	Fan.....	6	3	Single.....	Mule.....	Paris, O., L. E. F. & W.
38	16	Drift.....	Furnace.....	6	3	Double.....	R. & M.....	Indian Run, O., W. & L. E.
30	8	Drift.....	Furnace.....	6	3	Single.....	R. & M.....	Louisville, O., P. Ft. W. & C.
31	19	Shaft.....	Furnace.....	1	5	Double.....	R. & M.....	Pigeon Run, O., W. & L. E.
9	3	Shaft.....	Steam Ex.....	1	4	Single.....	Mule.....	W. Brookfield, O.
35	16	Slope.....	Steam Ex.....	Gp.	4	Double.....	Mule.....	Newman, O., P. Ft. W. & C.
30	13	Shaft.....	Steam Ex.....	Gp.	4	Double.....	Mule.....	Canal Fulton, O., B. & O.
40	23	Shaft.....	Fan.....	1	5	Double.....	Mule.....	E. Greenville, O., B. & O.
12	4	Slope.....	Fan.....	1	4	Single.....	Mule.....	Newman, O., P. Ft. W. & C.

SEVENTH MINING DISTRICT—Concluded.

STARK COUNTY—Concluded.

Name of Mine.	Name of Owner or Operator.	Name and P. O. Address of Superintendent.
C. & O. B.....	Nantonal Fire Proofing Co., Canton, O.....	Jno. Merley, Canton, O.....
Canton.....	Canton Coal Mining Co., Canton, O.....	A. C. Holderbarn, Canton, O.....
East End.....	Zeber & West, Osnaburgh, O.....	Jno. Zuber, Osnaburgh, O.....
Whitacre No. 5.....	Whitacre Fire Proofing Co., Waynesburg, O.....	R. E. Whitacre, Waynesburg, O.....
Whitacre No. 6.....	Whitacre Fire Proofing Co., Waynesburg, O.....	R. E. Whitacre, Waynesburg, O.....
Canton Hollow Block.....	Canton Hollow Block Co., Canton, O.....	Jno. Hadley, Canton, O.....
South Massillon.....	South Massillon Coal Co., Massillon, O.....	H. L. Leahy, Massillon, O.....
East Massillon.....	East Massillon Coal Co., Massillon, O.....	C. A. Weinrich, Massillon, O.....
Bramley.....	Cleveland-Massillon Coal Co., Massillon, O.....	J. P. Jones, North Lawrence, O.....
St. Elmo.....	Oberlin & Wise, Canton, O.....	A. Oberlin, Canton, O.....

SUMMIT COUNTY.

Turkey Foot..... | Brewster Coal Co., Akron O..... | J. J. Dagenhard, Magnolia, O.....

WAYNE COUNTY.

West Lebanon No. 1.....	West Lebanon Coal Co., Cleveland, O.....	Wm. Empfield, N. Phila., O.....
West Lebanon No. 2.....	West Lebanon Coal Co., Cleveland, O.....	Wm. Empfield, N. Phila., O.....
Daleton No. 14.....	Massillon Coal Mining Co., Massillon, O.....	Wm. Bumgardner, Massillon, O.....
New Chippewa.....	Wagoner Coal Co., Akron, O.....	F. S. Sandes, Doylestown, O.....
Stewart.....	Card & Prosser Coal Co., Cleveland, O.....	O. V. Dibble, Wadsworth, O.....
Colonial.....	Colonial Coal Co., Cleveland, O.....	W. A. Knoble, Doylestown, O.....
Mobile.....	W. P. Ries, Doylestown, O.....	Jno. Santrock.....
California.....	Seiberling & Miller, Doylestown, O.....	

SEVENTH MINING DISTRICT—Concluded.

STARK COUNTY—Concluded.

No. of miners employed.	No. day hands employed.	Kind of Opening.	Mode of Ventilation.	No. of seam penetrated.	Thickness of vein.	Plan of working mine.	Kind of haulage.	Railroad connections.
18	6	Drift.....	Furnace...	6	3	Double...	Mule.....	Osnaburgh, O., W. & L. E. R. R.
20	9	Shaft.....	Steam Ex...	4	4½	Double....	Mule.....	Canton, O.
10	2	Drift.....	Furnace....	6	3	Single.....	Mule.....	Osnaburgh, O.
13	4	Drift.....	Furnace....	6	2½ C 6	Single.....	Mule.....	Waynesburg, O., C. & P.
10	2	Drift.....	Furnace....	6	2½ C 6	Single.....	Mule.....	Waynesburg, O., C. & P.
24	4	Drift.....	Furnace....	4	5	Single.....	Mule.....	Canton, O., W. & L. E.
18	16	Shaft.....	Steam Ex...	1	5	Double....	Mule.....	Navarre, O., W. & L. E.
9	2	Shaft.....	Steam Ex...	6	2½	Single.....	Mule.....	Massillon, O.
10	10	Slope.....	Fan.....	1	3½	Double....	Mule.....	N. Lawrence, O., P. Ft. W. & C.
9	2	Drift...	Furnace....	4	4½	Single.....	Mule.....	Canton, O.
70 | 27 | Shaft..... | Fan..... 1 | 4 | Double..... | Mule..... | Manchester, O., C. A. & C.								
19	15	Shaft.....	Fan.....	1	5	Double....	Mule.....	W. Lebanon, O., C. A. & C.
10	10	Slope.....	Steam Ex...	1	5	Double....	Mule.....	W. Lebanon, O., C. A. & C.
23	10	Shaft.....	Steam Ex...	1	4	Double....	Mule.....	Daleton, O., W. & L. E. R. R.
48	14	Slope.....	Steam Ex...	1	4	Double....	Mule.....	Doylestown, O., Erie R. R.
35	11	Shaft.....	Steam Ex...	1	4	Double....	Mule.....	Doylestown, O., Erie R. R.
6	3	Slope.....	Steam Ex...	1	4	Double....	Mule.....	Doylestown, O., Erie R. R.
6	3	Drift.....	Furnace....	1	4	Single.....	Mule.....	Doylestown, O., Erie R. R.
5	3	Drift.....	Furnace....	1	4	Single.....	Mule.....	Doylestown, O., Erie R. R.

FIRE CLAY MINES.

Name of Operator or Owner.	P. O. Address.
Athens County.	
Nelsonville Sewer Pipe Co.....	Nelsonville, Ohio.
Athens Brick Co.....	Athens, Ohio.
Wassall Clay Co.....	Glouster, Ohio.
Carroll County.	
Minerva Paving Brick Co.....	Minerva.
Malvern Fire Clay Co.....	Malvern.
Greer-Beatty Fire Clay Co.....	Magnolia.
Robinson Clay Product Co.....	Akron.
Columbiana County.	
Michael Murphy.....	East Liverpool.
Vulcan Clay Co.....	Wellsville.
Columbia Fire Clay Co.....	Cleveland.
Deveny -Kirk Coal Co.....	Salineville.
American Sewer Pipe Co.....	Pittsburgh.
Champion Clay Co.....	Wellsville.
Card & Prosser Coal Co.....	Lisbon.
Guernsey County.	
Guernsey Brick & Construction Co.....	Cambridge.
Hocking County.	
Columbus Brick & Terra Cotta Co.....	Columbus.
Logan Brick Mfg. Co.....	Logan.
Joe Bartholomew.....	Logan.
The Haydenville Co.....	Haydenville.
Holmes County.	
Millersburgh Brick & Tile Co.....	Millersburgh.
Redett & Sons.....	Fredericksburgh.
Jackson County.	
Oak Hill Fire Brick & Coal Co.....	Oak Hill.
Aetna Fire Brick Co.....	Oak Hill.
Jefferson County.	
Minor Fire Brick Co.....	Empire.
Ohio River Sewer Pipe Co.....	Empire.
Toronto Fire Clay Co.....	Toronto.
Adolph Pritschaw.....	Irondale.
East Ohio River Sewer Pipe Co.....	Pittsburgh.
Standard Fire Brick Co.....	Empire.
Am..... Sewer Pipe Co.....	Pittsburgh.

LIST OF FIRE CLAY MINES—Continued.

Name of Owner or Operator.	P. O. Address.
Lawrence County.	
Hanging Rock Iron Co.....	Hanging Rock.
E. B. Willard.....	Steece.
Halley Coal Co.....	Pedro.
B. F. Lind.....	Ironton.
Mahoning County.	
Greenford Fire Clay Co.....	Greenford.
M. J. Dustman.....	Berlin Center.
Garfield Brick Co.....	Alliance.
Robert Auld.....	Salem.
National Coal & Clay Co.....	Washingtonville.
Muskingum County.	
Chauncey Ford.....	Roseville.
S. Zanesville Sand, Pipe & Brick Co.....	South Zanesville.
S. M. Stump, Rural Route No. 11.....	Zanesville.
Wm. Bunting, Rural Route No. 11.....	Zanesville.
George Melhollin.....	Hopewell.
A. Emery.....	Zanesville.
American Sand Co.....	Columbus.
W. H. Weller.....	Zanesville.
Perry County.	
Solomon Hightshoe.....	Somerset.
New Lexington Pressed Brick Co.....	New Lexington.
Ohio Mining & Manufacturing Co.....	Shawnee.
H. E. Stoneburner.....	Crooksville.
G. D. Allen.....	Roseville.
Iron Clay Brick Co.....	Shawnee.
Scioto County.	
Portsmouth-Harbison-Walker Co.....	Portsmouth.
Scioto Fire Brick Co.....	Sciotoville.
Morgan & Horton.....	Eifort.
W. E. Ketler.....	Lilly.
Stark County.	
Metropolitan Paving Brick Co.....	Canton.
Massillon Stone & Fire Brick Co.....	Massillon.
Louisville Brick & Tile Co.....	Louisville.
Diamond Portland Cement Co.....	Middlebranch.
Champion Tile Works.....	Louisville.
Canton Sparta Brick Co.....	Mineral City.
Canton Hollow Block Co.....	Canton.
Whitacre Fire Proofing Co.....	Waynesburgh.
Seaman Plaster Co.....	Canton.
The Everhard Co.....	Massillon.
Todd Bros.....	Mapleton.

LIST OF FIRE CLAY MINES—Concluded.

Name of Owner or Operator.	P. O. Address.
Summit County.	
Akron Roofing Tile Co.....	Akron.
Myers & Lloyd.....	Mogadore.
W. J. Webb.....	Mogadore.
H. I. Swinehart.....	East Akron.
J. Stetler Rural Route No. 1.....	East Akron.
Akron Clay Co.....	Akron.
Robinson Clay Product Co.....	Akron.
American Sewer Pipe Co.....	Pittsburgh, Pa.
Trumbull County.	
J. V. Rose.....	Sharon, Pa.
Tuscarawas County.	
Buckeye Fire Clay Co.....	Uhrichsville.
Advance Fire Clay Co.....	Uhrichsville.
Dover Fire Brick Co.....	Strasburgh.
C. E. Holden.....	Mineral City.
Geo. J. Markley.....	Mineral City.
J. J. Christner & Sons.....	Baltic.
Paul Clay Co.....	Akron.
American Fire Brick & Clay Co.....	Mineral City.
Robison Clay Product Co.....	Akron.
American Sewer Pipe Co.....	Pittsburgh.
Robinson-Graves Sewer Pipe Co.....	Uhrichsville.
Vinton County.	
Jacob Earnheart.....	Hue.

IRON ORE MINES.

Name of Owner or Operator.	P. O. Address.
<p style="text-align: center;">Lawrence County.</p> <p> Hecla Charcoal Iron Co..... The Vernon Iron Co..... McGugin & Co..... Hanging Rock Iron Co..... E. B. Willard..... </p> <p style="text-align: center;">Scioto County.</p> <p> The Clare Iron Co..... Morgan & Horton..... Hanging Rock Iron Co..... </p>	
<p> Ironton. Campbell. Olive Furnace. Hanging Rock. Steece. </p> <p> Bloom Switch. Eifort. Hanging Rock. </p>	

LIMESTONE QUARRIES.

Name of Owner or Operator.	P. O. Address.
Adams County.	
John McNeilan.....	West Union.
R. J. Kincaid.....	West Union.
S. L. Rice.....	Portsmouth.
J. H. Ellison.....	Manchester.
Samuel Hopkins.....	Manchester.
Allen County.	
C. L. Sanford.....	Lima.
Western Ohio Railway Co.	Lima.
Frank Roush.....	Lima.
Edward Gray.....	Lima.
J. W. Long.....	Lima.
Pugh Stone Co.....	Lima.
Watt Bros.....	Herring.
L. J. Siddall.....	Bluffton.
Sam Herr.....	Bluffton.
Mollett Bros.....	Bluffton.
E. J. Ford.....	Elida.
Arthur Fisher.....	Delphos.
Kraft Bros.....	Ada.
Butler County.	
D. M. Skelley.....	Hamilton.
J. B. Scott.....	Hamilton.
G. Kuentzle.....	Hamilton.
Daniel Pabst.....	Hamilton.
Clark County.	
The Strunk Meyer Lime Co.....	Cold Springs.
Casparis Stone Co.....	Columbus.
Springfield Stone & Lime Co.....	Springfield.
Samuel Taylor.....	Springfield.
Mills Bros.....	Springfield.
The Moores Lime Co.....	Springfield.
J. W. Jenkins.....	Springfield.
W. A. Rubsam.....	Springfield.
Daniel Baker.....	Enon.
C. F. Jackson Stone Co.....	Springfield.
Clermont County.	
J. D. Sorrell.....	Loveland.
Henry W. Harlow.....	Marathon.
E. Hulick.....	Batavia.
Crawford County.	
Joseph Snively.....	Osceola.
Brokensword Stone Co.....	Bucyrus.
G. V. Haren.....	Lykens.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
Clinton County.	
F. Miars.....	Wilmington.
Brown.....	Wilmington.
L. Benlehr, R. R. No. 2.....	Wilmington.
Frazier.....	Wilmington.
Ballard.....	Wilmington.
Arbuck.....	Wilmington.
Ryan.....	New Vienna.
W. M. Oglesby.....	New Burlington.
Foster.....	W. Woodville.
Brandt.....	W. Woodville.
Delaware County.	
Campbell.....	Delaware.
S. Owens.....	Delaware.
Redith & Son.....	Radnor.
Merchant.....	Rathbone.
Huffey.....	Rathbone.
Warren.....	Warrenburgh.
Lime & Stone Co.....	Delaware.
Darke County.	
Hershey.....	Greenville.
Bennoeth.....	Weavers Station.
Erie County.	
Wagner Stone Co.....	Sandusky.
Krueger, Rural Route No. 2.....	Sandusky.
Island Lime & Transport Co.....	Cleveland.
Liles.....	Sand Hill.
Barnes, Rural Route No. 2.....	Sandusky.
Franklin County.	
Miller, 95 Central Ave.....	Columbus.
Columbus Stone Co.....	Columbus.
Sparis Stone Co.....	Columbus.
McHogan.....	Marble Cliff.
McNinch, 116 Central Ave.....	Columbus.
Camb.....	Dublin.
Hompson.....	Dublin.
Field.....	Hilliards.
Greene County.	
W. Helmer, Rural Route No. 8.....	Dayton.
S. Irwin Co.....	Cedarville.
W. Taylor.....	Cedarville.
Bales & Conklin.....	Xenia.
Toland.....	Jamestown.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
Hamilton County.	
Ernest Howe, 225 Stark St.....	Cincinnati.
City Workhouse.....	Cincinnati.
Benj. Cooney, 718 Whittier, Avondale.....	Cincinnati.
Henry Stagg & Sons, Miller Ave., Norwood.....	Cincinnati.
Arthur W. Davis, 415 Johnson Bldg.....	Cincinnati.
Grant Bros., Mt. Lookout, Station C.....	Cincinnati.
Nicholas Ruebel, Station L.....	Cincinnati.
Mary Zaeske, Westwood Station.....	Cincinnati.
W. R. Moore, Terrace Park.....	Cincinnati.
F. E. Weihe.....	Carthage.
Chas. M. Fields.....	Glendale.
Jacob Weber.....	Carthage.
Rucker Stone Co.....	Greenfield.
C. S. Boone.....	Milford.
Hancock County.	
J. W. Wells & Son.....	Findlay.
Hirscher Stone Co.....	Findlay.
Isaac Hershey.....	Findlay.
Krout & Clark.....	Mt. Blanchard.
Wm. Bibler.....	Arlington.
David Huffman.....	Ranson.
Amos Renkle.....	Ranson.
W. L. Schoonover, Rural Route No. 4.....	Findlay.
Tarbox & McCall.....	Findlay.
C. E. Edington, Rural Route No. 1.....	McComb.
Hardin County.	
Jas. G. Tressel.....	Ada.
E. H. France.....	Bloomville.
D. R. McArthur & Co.....	Kenton.
John Herzogg.....	Patterson.
Patterson & Kraft.....	Ada.
Highland County.	
Rucker Stone Co.....	Greenfield.
R. P. Pinkerton, Rural Route No. 7.....	Hillsboro.
John Luft.....	Leesburgh.
Frank Sharp.....	Lynchburgh.
Holmes County.	
John C. Duncan.....	Millersburgh.
Jackson County.	
W. B. Yates.....	Kitchen.
Lawrence County.	
E. B. Willard & Co.....	Ironton.
Hanging Rock Iron Co.....	Hanging Rock.
McGugin & Co.....	Olive Furnace.
Ironton Portland Cement Co.....	Ironton.
Vernon Iron Co.....	Campbell.
Nannie H. Kelley.....	Steece.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
Logan County.	
Bellefontaine Stone & Lime Co.....	Bellefontaine.
..... & Cantwell.....	Bellefontaine.
Brown & Son.....	Belle Center.
Stratton.....	West Middleburg.
Watt.....	West Liberty.
Wandel.....	West Liberty.
Lucas County.	
Watt & Son.....	White House.
Marion County.	
Watt Evans Lime & Stone Co.....	Marion.
Watt & Christian Lime & Stone Co.....	Marion.
Fairbanks.....	Marion.
Wattens & Son.....	Owens.
Wattinamon.....	Marion.
Miami County.	
Watt Stone Co.....	Ludlow Falls.
Wattoppock.....	Ludlow Falls.
Watt, Stalter Co.....	Piqua.
Watt, Marble Co.....	Piqua.
Wattce.....	Covington.
Wattuhl.....	Covington.
Wattstcher.....	Covington.
Wattknor.....	Covington.
Wattover, Rural Route No. 4.....	Covington.
Wattughlin.....	Covington.
Wattxler.....	Covington.
WattDean.....	Brandt.
WattBrubaker & Son.....	Rex.
Wattckson.....	Covington.
Wattsey.....	Troy.
Watt, Building & Manufacturing Co.....	Tippecanoe City.
Montgomery County.	
Wattis & Talbot Stone Co.....	Dayton.
Wattin Smith.....	Dayton.
Wattanuel.....	Centerville.
Wattvans.....	Englewood.
Wattam, Rural Route No. 3.....	Dayton.
Wattengas.....	Englewood.
Wattlick, Rural Route No. 4.....	Dayton.
Wattoup, Rural Route No. 3.....	Dayton.
Wattuld, Rural Route No. 9.....	Dayton.
Wattost.....	Dayton.
Wattshaw.....	Union.
Wattaffer.....	Brookville.
Wattoutman, Rural Route No. 1.....	Brookville.
Wattindale.....	Union.
WattFortney, Rural Route No. 2.....	Germantown.
WattWeaver.....	Farmersville.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
Muskingum County.	
R. E. Cowden.....	Dresden.
Mercer County.	
Emil Wagner.....	Ft. Recovery.
Ottawa County.	
Toledo White Lime Co.....	Clay Center.
Ottawa Lime & Cement Co.....	Toledo.
Dr. Joseph Kingham.....	Rocky Ridge.
W. J. Coulter.....	Morristown.
Kelly Island Lime & Tile Co.....	Cleveland.
Jas. Duncan.....	Toledo.
Paulding County.	
Reason Johnson, R. R. No. 6.....	Defiance.
John McDorman.....	Roselms.
J. B. Carey & Son.....	Scott.
Jos. Shisler & Son.....	Oakwood.
Pickaway County.	
Mrs. Bell Z. McCoy.....	Circleville.
Pike County.	
G. W. Nace.....	Sinking Springs.
Perry County.	
David Hardy.....	Maxville.
Preble County.	
J. H. Killough.....	College Corner.
E. A. Ridenour.....	College Corner.
O. M. Wright.....	College Corner.
John A. Elliott.....	College Corner.
Jas. Saylor.....	Eaton.
Jas. A. Kautz & Co.....	Eaton.
Simon Parks.....	Eaton.
Fisher & Royer.....	Eaton.
H. C. Foster.....	Lewisburg.
F. J. Wilson & Co.....	Lewisburg.
Nathan C. Sloan.....	Morning Sun.
Peter Foutz.....	Camden.
G. W. Mann.....	Morning Sun.
Richard Danily.....	New Paris.
New Paris & Richmond Stone Co.....	Richmond, Ind.
Noah Nill.....	West Alexandria.

LIST OF LIMESTONE QUARRIES—Continued.

Name of Owner or Operator.	P. O. Address.
Putnam County.	
H. M. Emans, R. R. No. 2.....	Ottawa.
Geo. Doriot.....	Pandora.
T. W. Thomas.....	Rimer.
J. J. Guffy.....	Rimer.
J. B. Sheurman.....	Ft. Jennings.
Nicholas Laner.....	Ottoville.
Samuel Myers.....	Drusilla.
Fred Seyer.....	Gilboa.
David P. Shoemaker.....	Bluffton.
Ross County.	
Rucker Stone Co.....	Greenfield.
Sandusky County.	
Gottron Bros.....	Fremont.
A. R. Corser.....	Fremont.
B. Saner.....	Fremont.
Standard Lime Co.....	Gibsonburg.
Woodville White Lime Co.....	Woodville.
W. Zeller.....	Maumee.
Seneca County.	
E. H. France.....	Bloomville.
Fred Sievert.....	Bloomville.
Weott Bros.....	Tiffin.
Tiffin Lime Building & Sandstone Co.....	Tiffin.
The McCollum Lime Co.....	Tiffin.
P. L. Van Alstyne.....	Fostoria.
Dougherty & Co.....	Toledo.
Fred Harpster.....	Flat Rock.
Armstrong & Hershberger.....	Republic.
Mrs. Jacob Voght.....	Scipia Siding.
Wolf & Dick.....	Flat Rock.
S. A. Saul.....	Bloomville.
Stark County.	
E. C. Boosinger.....	Brimfield.
Bert Clapsaddle.....	Marlboro.
Maple Spring Lime & Coal Co.....	Cleveland.
Diamond Portland Cement Co.....	Middlebranch.
Seaman Plaster Co.....	Canton.
F. Heims.....	Waco.
Scioto County.	
Clare Iron Co.....	Bloom Switch.
Morgan & Horton.....	Eifort.
Trumbull County.	
J. V. Rose.....	Sharon, Pa.

LIST OF LIMESTONE QUARRIES—Concluded.

Name of Operator or Owner.	P. O. Address.
Union County.	
C. H. Seely.....	Jerome.
Van Wert County.	
B. F. Lealie.....	Convoy.
E. H. France.....	Bloomville.
Wm. J. Semple.....	Van Wert.
J. B. Carey.....	Scott.
Clover Leaf Stone Co.....	Van Wert.
France & Ireland.....	Van Wert.
J. W. Bowersock & Co.....	Wetsel.
Wood County.	
Dougherty & Co.....	Toledo.
The Lime City Co.....	Toledo.
N. B. Eddy & Co.....	Lucky.
Snowflake Lime Co.....	Bowling Green.
Urschell Lime Co.....	Sugar Ridge.
C. J. Miller & Co.....	Toledo.
Miller, Jones & Co.....	Bowling Green.
Geo. E. Mercer.....	Bowling Green.
H. P. Meyer.....	Hammansburgh.
G. Zeller.....	Maumee.

MINING LAWS
OF THE
STATE OF OHIO
WITH
Latest Amendments

Mining Laws of Ohio.

INSPECTOR OF MINES.

SEC. 290. For the purpose of facilitating an efficient and thorough inspection of mines in Ohio, and to provide an adequate inspecting force therefor, the Governor shall appoint, by and with the consent of the senate, one chief inspector, who, with the approval of the governor, shall appoint five district inspectors of mines; the chief inspector shall hold his office for the term of four years, and the district inspectors shall hold their office for the term of three years from the date of their appointment, and until their successors are appointed and qualified; the first appointments hereunder shall be made within thirty days from the date when this act shall take effect; and in case of the resignation, removal or death of the chief inspector, or any district inspector, the vacancy shall be filled in the manner above provided for original appointments for the unexpired term only, of the position so made vacant. No person shall be appointed chief inspector of mines unless he is possessed of a competent knowledge of chemistry, the geology of Ohio, and mineralogy, in so far as those sciences relate to mining, and has a practical knowledge of mining engineering, and the different systems of working and ventilating mines, and the nature and properties of the noxious and poisonous gases of mines, particularly fire damp, and of the best means of preventing and removing the same; and no person shall be appointed district inspector of mines unless he be a practical miner of at least five years' experience, and a resident of the district for which he is appointed, for at least two years, and is possessed of a practical knowledge of the best mode of working and ventilating mines, of the means of detecting the presence of bad or foul air, noxious and poisonous gases, and of the best means of preventing and removing the same.

Appointment of chief and district inspectors; who eligible.

SEC. 290a. That authority be and is hereby given to appoint two additional district inspectors of mines; and they shall be appointed in the same manner and possess the same qualifications and receive the same compensation as the five district inspectors of mines authorized by said Sec. 290. The term of office of the two district inspectors of mines herein provided for shall be three years, and they shall take an oath and give bond, as provided in Sec. 291 of the Revised Statutes of Ohio, and shall be subject to the regulations and requirements of the district inspectors authorized in said Sec. 290, as provided in chapter nine of the Revised

Additional district inspectors.

Statutes of Ohio. The chief inspector of mines shall assign said additional inspectors for service in districts to be designated by him, and he is authorized to divide the State in seven districts, in each of which one of the district inspectors of mines shall reside.

Bond and
oath.

SEC. 291. Before entering upon the discharge of the duties of their respective offices, the chief inspector and district inspectors shall give bond to the State, the former in the sum of five thousand dollars, and the latter in the sum of two thousand dollars each, to be approved by the governor, conditioned for the faithful performance of their duties, respectively; sa'd bonds, with an oath of office on each, and approval of the governor indorsed thereon, shall be forthwith deposited with the Secretary of State; the inspectors, while in office, shall not act as agent, manager or mining engineer for any operator, or in any way be interested in operating any mine.

Their powers
and duties.

SEC. 292. The chief inspector and district inspectors shall give their whole time and attention to the duties of their offices, respectively; it shall be the duty of the district inspectors to examine all the mines in their respective districts as often as possible, to see that all the provisions and requirements of this chapter are strictly observed and carried out; they shall particularly examine the works and machinery belonging to any mine, examine into the state and condition of the mines as to ventilation, circulation and condition of air, drainage and general security; they shall make a record of all examinations of mines in their respective districts, showing the date when made, the condition in which the mines are found, the extent to which the laws relating to mines and mining are observed or violated, the progress made in the improvement and security of life and health sought to be secured by the provisions of this chapter, number of accidents, injuries received, or deaths in or about the mines, the number of mines in their respective districts, the number of persons employed in or about each mine, together with all such other facts and information of public interest concerning the condition of the mines, development and progress of mining in their respective districts as they may think useful and proper, which record shall, on or before the first Monday of every month, be filed in the office of the chief inspector, to be by him recorded, and so much thereof as may be of public interest, to be included in his annual report; in case of any controversy or disagreement between the district inspector and the owner and [or?] operator of any mine, or the person working therein, or in case of conditions of emergencies requiring counsel, the district inspector may call on the chief inspector for such assistance and counsel as may be necessary; should the district inspector find any of the provisions of this chapter violated or not complied with, by any owner, lessee, or agent in charge of any mine, he shall immediately notify such owner, lessee or agent in charge, of such neglect or violation, and unless

the same is, within a reasonable time, rectified, and the provisions of this chapter fully complied with, he shall institute a prosecution under the provisions of section six thousand eight hundred and seventy-one (6871) of the Revised Statutes. The inspectors shall exercise a sound discretion in the enforcement of the provisions of this act, and if in any respect (which is not provided against by, or may result from a rigid enforcement of any express provisions of this chapter), the inspector find any matter, thing or practice in or connected with any such mine, to be dangerous or defective, so as, in his opinion, to threaten or tend to the bodily injury of any person, the inspector may give notice in writing thereof to the owner, agent or manager of the mine, and shall state in such notice the particulars in which he considers such mine, or any part thereof, or any matter, thing of [or?] practice to be dangerous or defective, and require the same to be remedied. For the purpose of making the inspection and examination provided for in this section, the chief inspector and the district inspectors shall have the right to enter any mine at all reasonable times, by night or by day, but in such manner as shall not unnecessarily obstruct the working of the mine; and the owner or agent of such mine is hereby required to furnish the means necessary for such entry and inspection; the inspection and examination herein provided for shall extend to fire clay, iron ore and other mines, as well as coal mines.

SEC. 293. The chief inspector shall designate the counties or portions thereof in the State which shall compose the different districts, and may at any time change the same, when in his judgment the best interests of the service may require, and shall issue such instructions, make such rules and regulations for the government of the district inspectors, not inconsistent with the powers and duties vested in them by law, as shall secure uniformity of action and proceedings throughout the different districts; and he may order one district inspector to the assistance of any other district inspector, or make temporary transfers of district inspectors, when, in his judgment, the efficiency or necessity of the service demands or premits, and he may, with the consent of the governor, remove any district inspector at pleasure; the district inspectors are hereby invested with all the powers and authority of county auditors, as sealers of weights and measures in the different counties of this State, and for any service performed as such sealers they shall receive the same compensation as now provided by section ten hundred and sixty-two (1062) of the Revised Statutes; but said inspector shall exercise said authority in connection with weights and measures only at mines in their respective districts; the chief inspector shall render such personal assistance to the district inspectors as they, from time to time, may require, and shall make such personal inspection of the mines as he may deem necessary, and his other duties will permit; he shall keep in his office and carefully preserve all

District, how made and changed.

Rules for district inspectors.

Power of chief over district inspectors.

Their powers as sealers of weights and measures.

Special duties of chief inspector.

maps, surveys and other reports and papers required by law to be filed with him, and so arrange and preserve the same as shall make them a permanent record of ready, convenient and connected reference; he shall compile and consolidate the reports of district inspectors, and annually make report to the governor of all his proceedings, as well as those of the district inspectors, the condition and operation of the different mines of the State, and the number of mines and the number of persons employed in or about such mines, the amount of coal, iron ore, limestone, fire clay, or other mineral mined in the State; and for the purpose of enabling him to make such report, the owner, lessee or agent in charge of such mine, who is engaged in mining, and the owner, lessee or agent of any firm, company or corporation in charge of any fire clay, or iron ore mined [mine?] or any limestone, or quarry, or who is engaged in mining or producing any mineral whatsoever in this State, shall, on or before the 31st day of January in every year, send to the office of the chief inspector of mines, upon blanks furnished by him, a correct return specifying with respect to the year ending on the preceding 31st day of December, the quantity of coal, iron ore, fire clay, limestone, or other mineral product in such mine or quarry, and the number of persons ordinarily employed in or about such mine; or quarry, below and above ground, distinguishing the persons and labor below ground and above ground. Every owner, lessee or agent of a mine or quarry who fails to comply with this section, or makes any return which to his knowledge is false in any particular, shall be deemed guilty of an offense against this section, and shall be fined one hundred dollars, to be recovered at the suit of the chief inspector in the name of the State of Ohio; he shall also include in such report such facts relative to the mineral resources of the State and the development of the same, as shall, in his judgment, be of public interest; he shall enumerate all accidents, and the manner in which they occurred, in or about the mines, and give all such other information as he thinks useful and proper, and make such suggestions as he deems important, relative to mines and mining, and any other legislation that may be necessary on the subject for the better preservation of the life and health of those engaged in such industry.

SEC. 294. The chief inspector shall have an office in the State House, in which shall be carefully kept the maps and plans of all mines in the State, and all records, correspondence, papers, and apparatus and property pertaining to his duties, belonging to the State, and shall be handed over to his successor in office; the district inspectors shall keep their offices in such place in their respective districts as will be most central and convenient to the mining region of their respective districts, and shall keep and preserve in their offices all maps, plans, surveys, and other papers belonging to their offices, in such manner as

His reports.

Mining operators to make certain report to him.

Penalty for their failure to make such reports.

Matters to be included in report of chief inspector.

Maps, plans of mines, etc., shall be kept in offices.

shall be of easy access and convenient reference to persons entitled to examine them. The district inspectors shall receive an annual salary of twelve hundred dollars (\$1,200) per annum, and the chief inspector shall receive the same salary as is now provided for inspector of mines under section twelve hundred and eighty-four of the Revised Statutes.

Salaries.

SEC. 295. There shall be provided for the inspectors weights and measures and all instruments and chemical tests necessary for the discharge of their respective duties under this chapter which shall be paid for on the certificate of the chief inspector, from his contingent fund, and shall belong to the State.

Instruments, etc., to be furnished inspectors.

SEC. 295a. It shall be unlawful for any mine owner, lessee or operator of coal mines in this State, employing miners at bushel or ton rates, or other quantity, to pass the output of coal mined by said miners over any screen or other device which shall take any part from the value thereof, before the same shall have been weighed and duly credited to the employe sending the same to the surface, and accounted for at the legal rate of weights as fixed by laws of Ohio.

Unlawful to screen coal before weighing.

SEC. 295b. The provisions of this act shall also apply to the class of workers, engaged in mines wherein the mining is done by machinery, known as loaders; whenever the workmen are under contract to load by the bushel, ton or any quantity, the settlement of which is had by weight, the output shall be weighed in accordance with the provisions of this act.

Provisions apply to "loaders."

SEC. 295c. Any mine owner, lessee or operator of coal mines in this State, neglecting or refusing to comply with the conditions required, to be performed by sections 295a and 295b, shall be deemed guilty of a misdemeanor, and upon conviction, be fined in any sum not exceeding six hundred (\$600) dollars, nor less than three hundred (\$300) dollars, at the discretion of the court.

Penalty.

SEC. 296. The owner or agent of any mine having an excavation of not less than fifteen thousand cubic yards, shall make, or cause to be made, an accurate map or plan of the working of such mine on a scale of not less than two hundred feet to the inch, showing the area mined or excavated, and the location and connection with such excavation of the mine of the lines of all adjoining lands, and the name or names of each owner or owners, so far as known, marked on each tract, and the owner or agent shall annually thereafter make, or cause to be made, an addition to said map, showing the progress and plan of the working of such mine during the previous year up to the date of survey; provided, that said additions shall be made semi-annually whenever the mine inspector deems it necessary and so directs. The map shall be kept at the office of such mine, and open to the inspection of the mine inspector, or his assistants, at all reasonable times, and at the request of the inspector the owner

Owner of a mine shall furnish a map of his mine, etc.

Inspector to cause maps to be made.

Additions made semi-annually.

or agent shall file a correct copy of such map with said mine inspector at Columbus, and in case of refusal on the part of the owner or agent to make and file such map, the inspector is authorized and required hereby to cause such map or maps to be made in duplicate, at the expense of said owner or agent, the cost of which shall be recoverable against the owner or agent in the name of the State mine inspector; and in case of refusal by said owner or agent to make, or cause such map and the additions thereto to be made, for sixty days after notice by the mine inspector, said agent or owner shall be liable to a fine of five dollars for each and every day until said map is made, which shall be collected in the name of the State of Ohio, at the suit of the State mine inspector, and the amount so recovered shall be paid into the township school fund of the township when collected. And when any mine is exhausted or abandoned, and before the pillars are drawn in any portion of the mine, the owner or agent thereof shall cause to be made a correct map of such mine, showing the area and working of the same to the day of abandoning, or of drawing pillars for the purpose of abandoning, and file such map within ninety days thereafter at the office of the county recorder in the county where such mine is located; said map shall have attached thereto the sworn certificate of the mining engineer making the map, and of the mine boss in charge of the underground workings of said mine; such map shall be properly labeled and filed by the recorder, and be preserved as a part of the records of the land on which such mines are located, and the recorder shall receive for said filing from said owner or agent a fee of fifty cents.

Cause maps to be made in duplicate.

Maps of abandoned mines to be made.

Shall have attached sworn certificates.

Outlets required.

Not apply to new openings.

Does not apply unless more than 20 men are employed.

Cages fitted with safe appliances.

SEC. 297. It is unlawful for the owner or agent of any coal mine, worked by shaft, to employ or permit any person to work therein, unless there are, to every seam of coal worked in each mine, at least two separate outlets, separated by natural strata of not less than one hundred feet in breadth, by which shafts or outlets distinct means of ingress and egress are always available to the persons employed in the mine; but it is not necessary for the two outlets to belong to the same mine if the persons employed therein have safe, ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine while being worked for the purpose of making communication between said two outlets so long as not more than twenty persons are employed at any one time in such mine, neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages, and other means of egress shall at all times be available for the persons employed, where there is no second outlet. The escapement shafts shall be fitted with safe and available appliances, by which the persons employed in the mine may readily escape

in case an accident occurs deranging the hoisting machinery at the main outlets, and such means or appliances for escape shall always be kept in a safe condition; and in no case shall an air shaft, with a ventilating furnace at the bottom, be construed to be an escapement shaft, within the meaning of this section. To all other coal mines, whether slopes or drifts, two such openings or outlets must be provided within twelve months after shipments of coal have commenced from such mine; and in case such outlets are not provided as herein stipulated it shall not be lawful for the agent or owner of such slope or drift to permit more than ten persons to work therein at any one time. In case a coal mine has but one shaft, slope or drift, for the ingress or egress of the men working therein, and the owner thereof does not own suitable surface ground for another opening, he may select and appropriate any adjoining land for that purpose, and may make an additional shaft or outlet under, through or upon any intervening land, or land adjoining, and shall be governed in his proceeding in appropriating such land by the provisions of law in force, providing for the appropriation of private property by corporations, and such appropriation may be made, whether he is a corporator or not; but no land shall be appropriated, under the provisions of this chapter until the court is satisfied that suitable premises can not be obtained upon reasonable terms.

Slopes and drifts must be provided within twelve months.

When owner does not own suitable ground.

SEC. 298. The owner or agent of every coal mine, whether shaft, slope or drift, shall provide and maintain for every such mine an amount of ventilation of not less than 100 cubic feet, per minute, per person employed in such mine, which shall be circulated and distributed throughout the mine in such a manner as to dilute, render harmless and expel the poisonous and noxious gases from each and every working place in the mine, and no working place shall be driven more than sixty feet in advance of a breakthrough, or air-way; and all breakthroughs, or air-ways, except those last made near the working-faces of the mine, shall be closed up and made air-tight, by brattice, trap doors, or otherwise, so that the currents of air in circulation in the mine may sweep to the interior of the mine, where the persons employed in such mine are at work, and all mines governed by the statute shall be provided with artificial means of producing ventilation, such as forcing, or suction fans, exhaust steam, furnaces or other contrivances, of such capacity and power as to produce and maintain an abundant supply of air, and all mines generating fire-damp shall be kept free from standing gas and every working place shall be carefully examined every evening with a safety lamp, by a competent person or persons, before any of the workmen are allowed to enter the mine. All underground entrances to any places not in actual course of working or extension shall be properly fenced across the whole width of such entrances so as to prevent persons from inadvertently entering the same.

Ventilation.

Shall not drive working place more than 60 feet in advance of breakthrough.

Working places examined every morning.

Safety apparatus and precautions.

Cover overhead of cages.

Boilers not nearer than 60 feet to any shaft or slope.

Competent engineers must be employed, etc.

Safety lamps the property of mine owner.

Lighting and ventilation.

Main doors shall have an attendant.

SEC. 299. The owner or agent of every coal mine operated by shaft, in all cases where the human voice can not be distinctly heard, shall forthwith provide and maintain a metal tube from the top to the bottom of such shaft, suitably calculated for the free passage of sound therein, so that conversation may be held between persons at the bottom and top of the shaft; there shall also be provided an approved safety-catch, and a sufficient cover overhead, on all carriages used for lowering and hoisting persons, and in the top of every shaft an approved safety-gate, and an adequate brake shall be attached to every drum or machine used for lowering or raising persons in all shafts or slopes; and there shall also be provided in every shaft a traveling or passage way from one side of a shaft bottom to the other, so that persons working therein may not have to pass under descending cages; and all slopes or engine planes, used as traveling ways by persons in any mine, shall be made of sufficient width to permit persons to pass moving cars with safety; but if found impracticable to make any slope or engine plane of sufficient width, then safety holes of ample dimensions, and not more than sixty feet apart, shall be made on one side of said slope or engine plane. Such safety holes shall always be kept free from obstructions, and the roof and sides shall be made secure. The boilers used for generating steam, and the buildings containing the boilers shall not be nearer than sixty feet to any shaft or slope, or to any building or inflammable structure connecting with or surrounding said shaft or slope; but this section shall not apply to any shaft or slope until the work of development and shipment of coal has commenced.

SEC. 300. No owner or agent of any coal mine operated by a shaft or slope shall place in charge of any engine used for lowering into or hoisting out of such mine persons employed therein, any but experienced, competent and sober engineers; and no engineer in charge of such engine shall allow any person, except such as may be deputed for that purpose, by the owner or agent, to interfere with it or any part of the machinery, and no person shall interfere or in any way intimidate the engineer in the discharge of his duties; and in no case shall more than ten men ride on any cage or car at one time, and no person shall ride upon a loaded cage or car in any shaft or slope.

SEC. 301. All safety lamps used for examining coal mines, or which are used in any coal mine, shall be the property of the owner of the mine, and shall be under the charge of the agent thereof, and in all mines, whether they generate fire-damp or not, the doors use [d] in assisting or directing ventilation of the mine, shall be so hung or adjusted that they will shut of their own accord and cannot stand open; and all main doors shall have an attendant, whose constant duty shall be to open them for transportation and travel, and prevent them from standing open longer than is necessary for persons or cars to pass through; and

the mining boss shall keep a careful watch over the ventilating apparatus and the air-way, and he shall measure the ventilation at least once a week, at the inlet and outlet, and also at or near the face of all entries, and the measurements of air so made shall be noted on blanks, furnished by the chief inspector; and on the first day of each month the mining boss of each mine shall sign one of such blanks, properly filled with the said actual measurements, and forward the same to the chief inspector, and any mining boss making false returns of such air measurements shall be deemed guilty of an offense against this section. Every person having charge of any mine, whenever loss of life occurs by accident, connected with the working of such mine, or by explosion, shall give notice thereof forthwith by mail or otherwise, to the inspector of mines, and to the coroner of the county in which such mine is situated, and the coroner shall hold an inquest upon the body of the person or persons whose death has been caused, and inquire carefully into the cause thereof, and shall return a copy of the findings and all the testimony to the chief inspector. The owner, agent, or manager of every mine shall, within twenty-four hours next after any accident or explosion, whereby loss of life or personal injury may have been occasioned, send notice in writing to the chief inspector, and shall specify in such notice the character and cause of the accident, and the name or names of the persons killed and injured, with the extent and nature of the injuries sustained. When any personal injury, of which notice is required to be sent under this section, results in the death of the person injured, notice in writing shall be sent to the chief inspector within twenty-four hours after such death comes to the knowledge of the owner, agent or manager; and when loss of life occurs in any mine by explosion, or accident, the owner, agent, or manager of such mine, shall notify the chief inspector, or the district inspector forthwith, of the fact and it shall be the duty of the chief inspector to go himself, or require one of the district inspectors to go, at once to the mine in which said death occurred, and inquire into the cause of the same, and to make a written report, fully setting forth the condition of the part of the mine where such death occurred, and the cause which led to the same; which report shall be filed by the chief inspector in his office as a matter or [of?] record, and for future reference.

Mine boss shall measure the air once a week.

Notice of accidents.

Shall give notice to the chief inspector and the coroner.

Coroner shall hold inquest.

Duty of inspectors.

Notice when loss of life occurs.

For any injury to persons or property, occasioned by any violation of this act, or any willful failure to comply with its provisions by any owner, agent or manager of any mine, a right of action shall accrue to the party injured, for any direct damage he may have sustained thereby; and, in any case of loss of life, by reason of such willful neglect or failure, aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for like recovery of damages for the injury they have sustained.

Penalty.

Right of action to party injured.

Other notices
to be given
chief inspec-
tor of mines.

The owner, agent, or manager of any mine shall also give notice to the chief inspector of mines in any or all of the following cases :

1. Where any change occurs in the name of any mine, or in the name of any owner, agent, or manager of any mine, or in the officers of any incorporated company which owns or operates a mine.

2. Where any working is commenced for the purpose of opening a new shaft, slope or mine, to which this act applies.

3. Where any mine is abandoned or the working thereof discontinued.

4. Where the working of any mine is recommenced after any abandonment or discontinuance for a period exceeding three months.

5. Where the pillars of a mine are about to be removed or robbed.

6. Where a squeeze or crush, or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs, or a dangerous body of gas is found in any mine.

SEC. 302. No child under fifteen years of age shall be allowed to work in any mine, and in all cases of minors applying for work the agent of such mine shall see that the provisions of this section are not violated ; he shall also keep a record of all minors employed by him, or by any person employed in said mine, giving the name, age, place of birth, parents' name and residence, with character of employment, and he shall demand from such minor proof that he has complied with the requirements of the school laws ; and it shall be the duty of the mine inspector to inspect such record and to report to the chief inspector of mines the number of minors employed in or about such mines and to enforce the provisions of this section.

Action for
non-compl-
ance with
statutes.

SEC. 303. In case any coal mines does not, in appliances for the safety of the persons working therein, conform to the provisions of this chapter, or the owner or agent disregards the requirements of this chapter, any court of competent jurisdiction may on application of the inspector, by civil action in the name of the State, enjoin or restrain the owner or agent from working or operating such mine until it is made to conform with the provisions of this chapter ; and such remedy shall be cumulative, and shall not take the place of or affect any other proceedings against such owner or agent authorized by law for the matter complained of in such action.

When gov-
ernor shall
convene a
board of ex-
aminers.

SEC. 304. When written charges of gross neglect of duty or malfeasance in office against any inspector is made and filed with the governor, signed by not less than fifteen coal miners or one or more operators of mines, together with a bond in the sum of five hundred dollars, payable to the State, and signed by two or more responsible freeholders, and conditioned for the payment of all costs and expenses

arising from the investigation of such charges, the governor shall convene a board of examiners, to consist of two practical coal miners, one chemist, one mining engineer, and one operator, at such time and place as he deems best, giving ten days' notice to the inspector against whom the charges are made, and also the person whose name appears first in the charges; and the board when so convened, and having been first duly sworn, truly to try and decide the charges made, shall summon any witnesses so desired by either party, and examine them on oath, which may be administered by any member of the board, and depositions may be read on such examination, as in other cases; and the board shall examine fully into the truth of such charges, and report the result of their investigation to the governor; and the board shall award the costs and expenses of such investigation against the inspectors or the persons signing the bond according to their finding, against said inspector or in his favor, which costs and expenses shall include the compensation of such board, of five dollars per day for each member, for the time occupied in the trial and in traveling from and to their homes; and the attorney general shall forthwith proceed to collect such costs and expenses, and pay the same into the State treasury, being in the first instance paid out of the State treasury on the certificate of the president of such board.

Duties of the board.

SEC. 305. In all coal mines in the State the miners employed and working therein, the owners of the land or other persons interested in the rental or royalty of any such mine, shall at all proper times have full right of access and examination of all scales, machinery or apparatus used in or about such mine to determine the quantity of coal mined, for the purpose of testing the accuracy and correctness of all such scales, machinery or apparatus; and such miners, landowners or other persons may designate or appoint a competent person to act for them, who shall at all proper times have full right of access and examination of such scales, machinery or apparatus, and sealing all weights and measures of coal mined, and the accounts kept of the same; but no more than one person on behalf of the miners collectively, or one person on behalf of the landowners or other persons interested in the rental or royalty jointly, shall have such right of access, examination and inspection of scales, weights, measures and accounts at the same time, and that such person shall make no unnecessary interference with the use of such scales, machinery or apparatus; and the miners employed in any mine may, from time to time, appoint two of their number to act as a committee to inspect, not oftener than once in every month, the mine and the machinery connected therewith, and to measure the ventilating current, and if the owner, agent or manager so desires, he may accompany said committee by himself or two or more persons which he may appoint for that purpose; the owner, agent or manager shall afford every necessary facility for making such inspection and measurement, but the com-

Right of access to mines, etc.

Right to test the accuracy of the scales.

Miners to appoint a committee to inspect mine and machinery, etc.

Committee to
report to the
inspector.

mittee shall not in any way interrupt or impede the work going on in the mine at the time of such inspection and measurement, and said committee shall, within ten days after such inspection and measurement, make a correct report thereof to the inspector of mines, on blanks to be furnished by said inspector for that purpose; and if such committee make to the inspector a false or untrue report of the mines, such act shall constitute a violation of this section.

SEC. 306. Only a pure animal or vegetable oil, or other oil as free from smoke as a pure animal or vegetable oil, and not the product or by-product of rosin, and which shall, on inspection, comply with the following test, shall be used for illuminating purposes in the mines of this State: All such oil must be tested at sixty degrees Fahrenheit. The specific gravity of the oil must not exceed twenty-four degrees Tagliabue. The test of oil must be made in a glass jar one and five-tenths inches in diameter by seven inches in depth. If the oil to be tested is below forty-five degrees Fahrenheit in temperature, it must be heated until it reaches about eighty degrees Fahrenheit; and should the oil be above forty-five degrees and below sixty degrees Fahrenheit it must be raised to a temperature of about seventy degrees Fahrenheit, when, after being well shaken, it should be allowed to cool gradually to a temperature of sixty degrees Fahrenheit, before finally being tested. In testing the gravity of the oil, the Tagliabue hydrometer must be, when possible, read from below, and the last line which appears under the surface of the oil shall be regarded as the true reading. In case the oil under test should be opaque or turbid, one-half of the capillary attraction shall be deemed and taken to be the true reading. Where the oil is tested under difficult circumstances, an allowance of one-half degree may be made for possible error in parallax before condemning the oil for use in the mine. All oil sold to be used for illuminating purposes in the mines of this State, shall be contained in barrels or packages branded conspicuously with the name of the dealer, the specific gravity of the oil, and the date of shipment.

SECTION 2. That section 306 be supplemented by the enactment of the following section, numbered as indicated:

SEC. 306a. Any person or persons, firm or corporation, which ships any oil contained in any barrel or barrels, package or packages, which are not branded as prescribed in section 306, said oil to be used for illuminating purposes in coal or any other mines, and any person or persons, firm or corporation which sells any oil other than that prescribed in section 306, to be used for illuminating purposes in coal or other mines, and any person or persons, firm or corporation, having in charge the operation or running of any mine, which, in a mine under his or its charge uses or permits the use of any oil other than that prescribed in section 306, and any miner or mine employe who uses, with a knowledge of its character, in any mine in this State, any oil other than that prescribed in section 306, shall be fined not less than five

nor more than fifty dollars; and any individual, firm, company or corporation which sells any oil other than that prescribed in section 306, in a quantity exceeding five barrels at one sale, to be used for illuminating purposes, in coal or other mines, shall be fined not less than twenty-five nor more than one hundred dollars. Mayors and justices of the peace shall have jurisdiction to try any violations of this section, and their judgment shall be final. Every person who, after being once convicted of violating this section, shall be convicted of again violating any of the provisions of this section, may, in addition to the fine before provided, be imprisoned not less than ten days nor more than thirty days. On complaint, before a mayor or justice of the peace, of a second violation of this act involving the punishment of imprisonment, if a trial by jury be not waived, a jury shall be chosen and the case tried, after the manner provided in section 3718a of the Revised Statutes. All fines assessed and collected under prosecutions begun, or caused to be begun by the chief inspector of mines, or any district inspector of mines, shall be paid by the court to the chief inspector of mines, and by him paid into the State treasury to the credit of a fund which is hereby appropriated for the use of the chief inspector of mines in prosecuting violations of this section. Any excess of fines collected over the expenses incurred in prosecutions under this section remaining at the close of the fiscal year, shall be credited to the general revenue fund of the State.

SECTION 3. Section 306, as amended March 29, 1892, (89 O. L., 164), is hereby repealed, and this act shall take effect and be in force from and after its passage.

SEC. 6871. Whoever knowingly violates any of the provisions of sections two hundred and ninety-seven, two hundred and ninety-eight, two hundred and ninety-nine, three hundred, three hundred and one, three hundred and two, and three hundred and five, or does any act whereby the life or health of the persons, or the security of any mine and machinery are endangered; or any miner or other person employed in any mine governed by this statute, who intentionally and willfully neglects or refuses to securely prop the roof of any working place under his control; or neglects or refuses to obey any order given by the superintendent of a mine in relation to the security of the mine in the part thereof where he is at work, or for fifteen feet back from the face of his working place; or any miner, workman, or other person who shall knowingly injure any water-gauge, barometer, air-course or brattice, or shall obstruct or throw open any air-ways, or shall handle or disturb any part of the machinery of the hoisting engine, or open a door of the mine and not have the same closed again, whereby danger is produced either to the mine or those that work therein; or who shall enter any part of the mine against caution; or who shall disobey any order given in pursuance of this act; or who shall do any willful act, whereby the lives and health of persons

Mines; penalty for injuring.

Penalty for neglecting to securely prop the roof.

Penalty for disturbing machinery.

Penalty for neglecting to notify coroner or chief inspector.

To supply timber.

working in the mine, or the security of the mine, or the machinery thereof, is endangered; or any person having charge of a mine, whenever loss of life occurs by accident connected with the working of such mine, or by explosion, who neglects or refuses to give notice thereof forthwith, by mail or otherwise, to the chief inspector of mines, and to the coroner of the county in which such mine is situate; or any such coroner who neglects or refuses to hold an inquest upon the body of the person whose death has been thus caused, and return a copy of his findings and all the testimony to the inspector, shall be fined not less than fifty dollars, or imprisoned in the county jail not more than thirty days, or both. The owner, agent, or operator of every coal mine shall keep a supply of timber constantly on hand, and shall deliver the same to the working place of the miner, and no miner shall be held responsible for accidents which may occur in mines where the provisions of this section have not been complied with by the owner, agent, or operator thereof.

AN ACT

For regulating the weighing of coal at the mine where mined.

Weighing of coal; oath of weighmaster.

Bond of land-owner.

Duty of prosecuting attorney.

Penalty.

SECTION 1. Be it enacted by the general assembly of the State of Ohio, That whoever shall be employed to weigh coal as it comes from the mine where mined, where such weight shall be the weight upon which the amount of mining for the person mining such coal shall be estimated, and the weight upon which the royalty due the owner of the lands from which such coal shall be mined, shall be estimated at any mine where ten or more miners shall be employed, shall take and subscribe an oath before some competent officer to administer such oath, that he will correctly weigh all coal taken from such mine under existing contracts between operator, miner and land owners, and give due credit for the same to the miner mining such coal in said mine, and the land owner when required, owning the lands from which such coal is mined, and shall enter into bond in the sum of three hundred dollars, with two sufficient sureties and payable to the State of Ohio, said bond to be approved by and filed with the township clerk of the township where such mine may be situated for the faithful discharge of such oath. Such oath to be endorsed upon said bond.

SEC. 2. It shall be the duty of the prosecuting attorney of the county in which such mine is situated, to prosecute all persons charged with violation of such oath.

SEC. 3. Any person convicted of such violation shall be fined in the sum of not less than fifty dollars, nor more than five hundred dollars, or imprisoned in the county jail of the county where conviction is had for not less than ten

days nor more than sixty days, or both, at the discretion of the court.

SEC. 4. This act shall take effect and be in force from and after September 1, 1898. When act takes effect.

Passed April 21, 1898.

AN ACT

Supplementary to section 3184 of the Revised Statutes, as amended March 22, 1891, to be sectionally numbered 3184a.

SEC. 3184a. Any person who performs labor in mining coal, or removing the same from the mines, or other manual labor connected therewith, for any coal or mining company owning, operating or leasing coal mines within this State, by virtue of a contract with the owner, owners, or his or their authorized agent, shall have a lien to secure the payment for the same upon the mine or mines of such company and upon all the rights of the company or corporation owning or leasing such mines, and upon all the personal property of any such company or corporation used in conducting their business of mining coal, whether the same be located at or near the mines or elsewhere. Lien upon mines for labor.

Passed March 27, 1889.

AN ACT

"To permit mine and quarry operators to cross roads," passed February 17, 1893.

SECTION 1. That any individual, partnership or corporation in Ohio, who may now or hereafter own any land or any interest either in fee or otherwise, containing any coal, clay or stone, and over any portion of which shall pass any State, county or township road or public highway, with the consent of the board of county commissioners in case of State or county roads, or township trustees in case of township roads, shall have and are hereby authorized to excavate, mine, quarry through or under any such road; provided, however, that before said work shall be commenced, said individual, partnership or corporation shall execute and deliver to the board of county commissioners of any such county, a bond with good and sufficient surety, in such an amount as shall be by said board considered sufficient to cover all damages that may accrue by reason of excavating, mining or quarrying through or under any such road, the same to be approved by said board; conditioned that while crossing over or mining or quarrying under any such road, a safe and unobstructed passage way or road shall be kept open by such individual, partnership or corporation for pub- Conditions upon which mine and quarry operators permitted to undermine or cross public roads.

lic use, and as soon as practicable the said road shall be fully restored to its original safe and passable condition.

How owner of land adjoining mine may enter and examine same.

SEC. 4374. A person owning land adjoining a mine worked for the production of coal, ore, or other mineral substance, or a person having an interest in such mine, having reason to believe that the protection of his interest in the mine, or in like minerals on his adjoining land, requires it, upon making affidavit to that effect before a justice of the peace or other proper officer, may enter such mine, and have an examination or survey made thereof; but such examination or survey shall not be made until one day's notice thereof is given to the parties in interest, nor at unreasonable times, but in such time and in such manner as will least interfere with the working of the mine, if the same is being operated at the time.

Facilities for such examination.

SEC. 4375. When the affidavit has been made and notice given, the person in charge of the mine shall, on the application of the party giving the notice, transport, by the ordinary method in use at such mine for entrance and exit, a surveying party of not more than five persons, furnish to such party a competent guide and supply them with approved safety lamps; and for every person so transported, he shall be entitled to receive, from the person requesting such survey, the sum of fifty cents, unless the shaft exceeds two hundred and fifty feet in depth, when he shall be entitled to the sum of one dollar for each person, and five dollars per day for the guide.

Damages sustained by such examination.

SEC. 4376. If the parties working or occupying such mine sustain any damage, for which compensation should be made, by reason of such examination or survey having been made at unreasonable times, or in an improper or unwarrantable manner, the person making the same, or causing the same to be made, shall be liable therefor.

Penalty for hindering such examination.

SEC. 4377. The parties working or occupying such mine shall not hinder or obstruct the examination or survey, when made at a reasonable time and in a reasonable manner, under a penalty of not less than fifty nor more than five hundred dollars for each offense, to be recovered before a court of competent jurisdiction.

Action for refusal to permit examination.

SEC. 4378. The party who makes the application for the survey may, upon the refusal of the owner or person in charge of the mine to comply with the foregoing provisions, recover judgment, as upon default, in a court of competent jurisdiction, against the owner of such mine, in such sum as such party may declare under oath he believes to be justly due him for coal or other mineral belonging to him taken by the owner of such mine without his permission, and the statute of limitations shall not be operative as against such claim; but the demand and refusal to enter such mine shall be first proven to the satisfaction of the court or jury, and the refusal of the person in charge of the mine shall be held to be the refusal of the owner.

SEC. 4379. The provisions of this chapter shall be available to any person who, on his oath, states that he is the owner or authorized agent of any owner of land which he believes contains coal or other valuable mineral substance within one mile of such shaft, although it does not adjoin any mine of the owner of such shaft; the affidavit required shall be sufficient if it state the lands in which the affiant is interested are in the vicinity of such shaft, and not more than one mile distant therefrom; and service upon any owner or superintendent of such shaft shall be sufficient.

To whom provisions concerning examination available.

OIL LAW AS AMENDED.

AN ACT

To amend sections 306-1, 306-2, 306-3, 306-4 and 306-5, and to repeal sections 306-5a, 306-5b, 306-5c, 306-5d, 306-5e, and 306-6 of the Revised Statutes of Ohio.

Be it enacted by the General Assembly of the State of Ohio:

SECTION 1. That sections 306-1, 306-2, 306-3, 306-4, and 306-5 of the Revised Statutes of Ohio be amended so as to read as follows.

Inspector of mines.

SEC. 306-1. It shall be the duty of every person, firm or corporation engaged in drilling or exploring for natural gas or oil upon any land from which coal is being mined upon notice from the chief inspector of mines of the State of Ohio, or from any district inspector of mines of said State, to make or cause to be made, an accurate map thereof, which shall show the boundaries of each tract of land drilled upon, and the buildings and all monuments found upon such premises. Each well shall be plainly marked by a name, number or letter, and located whenever possible with reference to some well defined and lasting monument, so that its exact location may be determined. Such map shall contain a sworn statement of the person, firm or corporation operating such oil or gas wells, that it is a true and accurate representation of the property; and a copy thereof shall be filed in the office of the chief inspector of mines and be open to inspection at all reasonable times.

Maps of coal, gas and oil lands required to be made; when.

Wells to be plainly marked.

Copy to be filed with inspector of mines.

SEC. 306-2. It shall be the duty of every person, firm or corporation leasing any land for coal mining purposes, and upon which gas or oil wells have been drilled to, or below any veins or seams of such mineral coal before proceeding to mine such coal to make, or cause to be made, and filed in the office of the chief inspector of mines such a map as is described in section 306-1 of the Revised Statutes of Ohio.

Maps to be made before beginning operations.

SEC. 306-3. Whenever any person, firm or corporation sinks any well for gas or oil on lands upon which coal or

Casing and sealing of well

or other mineral lands.

other mineral is being mined, and which well passes through any mine, it shall be the duty of the person drilling such well to drill the hole to a depth of at least ten feet below the vein of coal or other mineral being mined, when such hole shall be cased and sealed upon the outside of the casing, with suitable material to the level of the coal floor; and each vein of mineral coal being mined, pierced by such well shall be sealed in same manner.

Sealing of well on abandonment.

Sec. 306-4. It shall be the duty of the owner of any well drilled for oil or gas and which in drilling shall have passed through any vein of mineral coal, before abandoning, or ceasing to operate such well, and before drawing the casing therefrom, to seal the same in the manner following: There shall be driven in such well to a depth of at least ten feet below the floor of the lowest coal measure a round seasoned wooden plug at least three feet in length and equal in diameter to the diameter of the well at that point, on the top of which plug there shall be filled at least seven feet of sediment or drilling, or cement and sand. Where any gas or oil well passes through any gas or oil bearing rock lying above the coal measure, the owner of said well or his agent, shall, upon abandoning or ceasing to operate such well, drive a dry wooden plug not less than two feet in length, equal in diameter to the diameter of the hole, to a point as near as possible to the top of the coal vein, on the top of which plug there shall be filled at least five feet of sediment or drillings, or cement and sand, as the mine inspector shall direct.

Failure of owner to cause well to be sealed.

In case such well is not plugged as aforesaid within ten days from the abandonment thereof, the chief inspector of mines, or a district inspector of mines, may cause the well to be plugged, and the costs and expenses of such plugging may be recovered of the person, firm or corporation whose duty it is to plug the same in the manner provided for the recovery of penalties by section 303-5 of the Revised Statutes of Ohio.

Penalty for non-compliance, etc.

Sec. 306-5. Every person, firm or corporation, failing to comply with any of the provisions of this act, shall be subject to a penalty of not less than one hundred dollars, nor more than two hundred dollars, to be recovered by action in the name of the State, and on collection, paid into the treasury of the State to the credit of a fund which is hereby appropriated for prosecuting violations of this act, to be paid out on requisition signed by the chief inspector of mines. Such action may be instituted in the court of common pleas of the county wherein any such well is located, or of Franklin county. In addition to the penalties herein provided, any person violating the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction, be fined in any sum not less than fifty dollars nor more than two hundred, or be imprisoned not less than ten days nor more than thirty days, or both.

SECTION 2. Said original sections 306-1, 306-2, 306-3, 306-4, 306-5, 306-5a, 306-5b, 306-5c, 306-5d, 306-5e, 306-6 of the Revised Statutes of Ohio be and the same are hereby repealed, and this act shall take effect and be in force from and after its passage. Repeals, etc.

W. S. MCKINNON,
Speaker of the House of Representatives.
CARL L. NIPPERT,
President of the Senate.

Passed April 3, 1902.

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AN ACT

To provide against the payment of wages in scrip, orders, etc., and against selling goods or supplies to employes at excessive prices.

SEC. 7015. It shall be unlawful for any person, firm, company, or corporation to sell, give, deliver, or in any manner issue, directly or indirectly, to any person employed by him or it, in payment of wages due for labor, or as advances on the wages of labor not due, any script, token, draft, check, or other evidence of indebtedness payable or redeemable otherwise than in money; any violations of the provisions of this section shall be punishable by a fine not less than twenty-five nor more than one hundred dollars, or imprisonment of not more than thirty days, or both; and the amount of any scrip, token, check, draft, order, or other evidence of indebtedness, sold, given, delivered, or in any manner issued, in violation of the provisions of this section, shall be recovered in money at the suit of any holder thereof, against the person, firm, company, or corporation selling, giving, delivering, or in any manner issuing the same; and any scrip, token, check, draft, order, or any other evidence of indebtedness issued in violation of the provisions of this section, and presented by the holder thereof, shall be taken as prima facie evidence in any court of the guilt or indebtedness of any person, firm, company or corporation selling, giving, delivering, or in any manner issuing the same, and for the purpose of this act, in case of a firm or corporation, the person selling, giving, delivering, or in any manner issuing said scrip, token, check, draft, order or other evidence of indebtedness shall be the defendant to the criminal action, and the firm, company or corporation shall be held as the defendant in the civil action. Nothing in this section shall apply or affect the right of any person, firm, company or corporation from giving orders on any store or business house, or firm in the business or profits of which he has no interest, directly or indirectly.

SEC. 7016. Whoever compels, or in any manner seeks to compel, or attempts to coerce an employe of any person, firm, or corporation to purchase goods or supplies from any

particular person, firm or corporation, shall be fined not more than one hundred nor less than twenty dollars, or imprisoned not more than sixty days, or both; and whoever sells goods or supplies of any kind, directly or indirectly, to his employe, or pays the wages of labor of his employes in goods or supplies of any kind, directly, or through the invention of scrip, order, or other evidence of indebtedness, at higher prices than the reasonable or current market value in cash of such goods or supplies, shall be liable to like punishment and penalties above specified, and shall in addition thereto, be liable in civil action to the party aggrieved, in double the amount of any charges made for such goods or supplies in excess of the reasonable or current market value in cash, of such goods or supplies.

SEC. 7017. The prosecuting attorney of any county, upon complaint made to him of any violation of either of the two preceding sections within his county, shall cause such complaint to be investigated before the grand jury.

AN ACT

To amend "an act to secure prompt payment of wages of certain employes twice in each month," passed March 21, 1887, (vol. 84, page 214).

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the above recited act be so amended as to read as follows:

Payment of
wages of cer-
tain employes
twice a month.

SEC. 1. That every incorporated manufacturing, mining, mercantile, street-railroad, telegraph, telephone, express, water company, and construction companies, or contractors building railroads, shall pay, in lawful money, or by check, draft or order, payable in lawful money, at sight or on demand, on a bank located at a distance not greater than eight miles from the place where said labor was performed, twice in each month, each and every employe engaged in its business, the wages earned by such employe to within ten days of the date of said payment; provided, however, that if at any time of payment any employe shall be absent from his regular place of labor, he shall be entitled to said payment at any time thereafter, during their regular business hours, upon demand; and provided, further, that said employer may retain at each payment, any amount said employer may order withheld from his or her wages for rent, powder, tools, tool sharpening, or oil due said employer.

Retention of
certain
amounts.

[Section 2, as mended March 27, 1889.]

SEC. 2. Any corporation mentioned in section 1 of this act, violating any provisions of this act, shall be punished by a fine not exceeding one hundred nor less than fifty dollars. Justices of the peace, mayors and police judges shall have final jurisdiction in all cases arising under the

provisions of this act; and a corporation shall be notified by warrant to be served upon the president, secretary, treasurer, or managing agent thereof; provided, that the defendant shall be entitled, on demand, to a trial by jury. If such prosecution be before a justice of the peace, and a trial by jury be not waived, the said justice shall issue a venire to any constable of the county, containing the names of sixteen electors of the county, to serve as jurors to try such case, and make due return thereof. Each party shall be entitled to two peremptory challenges, and shall be subject to the same challenges as jurors are subject to in criminal cases in the court of common pleas. If the venire of sixteen names be exhausted without obtaining the required number to fill the panel, the justice may direct the constable to summon any of the bystanders to act as jurors; but costs shall not be required to be advanced or paid by a person or an officer authorized or required by statute to prosecute such cases; and if the defendant be acquitted, or if he be convicted, and committed to jail in default of payment of fine and costs, the justice, mayor, or police judge, before whom the case was brought, shall certify such costs to the county auditor, who shall examine, and, if necessary, correct the account, and issue his warrant to the county treasurer in favor of the respective officers to whom costs are due for the amount due to each; provided, complaint for such violation is made within thirty days from the date thereof; providing that in pursuance of and under this act there shall not be more than one conviction of the same corporation during any two weeks. And it shall be the duty of the inspector of shops and factories, on complaint of three or more employes of such corporation to enforce the provisions of this act.

AN ACT

to authorize the creation and to provide for the operation of tribunals of voluntary arbitration to adjust industrial disputes between employers and employed.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio. That the court of common pleas of each county; or judge thereof in vacation, shall have the power, and upon the presentation of the petition, or of the agreement hereinafter named, it shall be the duty of said court, or judge thereof in vacation, to issue, in the form hereinafter named, a license or authority for the establishment within and for each county of tribunals for voluntary arbitration and settlement of trade disputes between employers and employed in the manufacturing, mechanical, or mining industries.

SEC. 2. That said petition or agreement shall be substantially in the form hereinafter given, and the petitions shall be signed by at least forty persons employed as work-

men and by four or more separate firms, individuals or corporations within the county, or by at least four employers, each of whom shall employ at least ten workmen, or by the representative of a firm, corporation, or individual employing not less than forty men in their trade or industry; provided, that at the time the petition is presented, the judge before whom said petition is presented, may, upon motion, require testimony to be taken as to the representative character of said petitioners, and if it appears that the said petitioners do not represent the will of a majority, or at least one-half of each party to the dispute, the license for the establishment of the said tribunal may be denied, or may make such other order in this behalf, as to him shall seem fair to both sides.

SEC. 3. If the said petition shall be signed by the requisite number of both employers and workmen, and be in proper form and contain the names of the persons to compose the tribunal, being an equal number of employers and workmen, the judge shall forthwith cause to be issued a license substantially in the form hereinafter given, authorizing the existence of such tribunal and fixing the time and place of the first meeting thereof, and an entry of the license so granted shall be made upon the journal of the court of common pleas of the county in which the petition originated.

SEC. 4. Said tribunal shall continue in existence for one year from the date of the license creating it, and may take jurisdiction of any dispute between employers and workmen, in any mechanical, manufacturing, or mining industry or business, who shall have petitioned for the tribunal, or have been represented in the petition therefor, or who may submit their disputes in writing to such tribunal for decision. Vacancies occurring in the membership of the tribunal shall be filled by the judge or court that licensed said tribunal, from three names presented by the members of the tribunal remaining of that class in which the vacancies occur. The removal of any member to an adjoining county shall not cause a vacancy in either the tribunal or the post of umpire. Disputes occurring in one county may be referred to a tribunal already existing in an adjoining county.

The place of umpire in any of said tribunals and vacancies occurring in such place, shall only be filled by the mutual choice of the whole of the representatives of both employers and workmen constituting the tribunal, immediately upon the organization of the same. The umpire shall be called upon to act after disagreement is manifested in the tribunal by failure during three meetings held and full discussion had. His award shall be final and conclusive upon such matters only as are submitted to him in writing and signed by the whole of the members of the tribunal, or by parties submitting the same.

SEC. 5. The said tribunal shall consist of not less than two employers or their representatives and two workmen. The exact number which shall in each case constitute the

tribunal shall be inserted in the petition or agreement, and they shall be named in the license issued. The said tribunal, when convened, shall be organized by the selection of one of their number as chairman and one as secretary, who shall be chosen by a majority of the members, or if such majority can not be had after two votes then by secret ballot, or by lot, as they prefer.

SEC. 6. The members of the tribunal shall receive no compensation for their services from the city or county, but the expenses of the tribunal, other than fuel, light, and the use of the room and furniture, may be paid by voluntary subscription, which the tribunal is authorized to receive and expend for such purposes. The sessions of such tribunal shall be held at the county seat of the county where the petition for the same was presented, and a room in the court house for the use of said tribunal shall be provided by the county commissioners.

SEC. 7. When no umpire is acting, the chairman of the tribunal shall have power to administer oaths to all witnesses who may be produced, and a majority of said tribunal may provide for the examination and investigation of books, documents and accounts pertaining to the matters in hearing before the tribunal, and belonging to either party to the dispute; provided, that the tribunal may unanimously direct that instead of producing books, papers and accounts before the tribunal an accountant, agreed upon by the entire tribunal, may be appointed to examine such books, papers and accounts, and such accountant shall be sworn to well and truly examine such books, documents and accounts, as may be presented to him, and to report the results of such examination in writing to said tribunal. Before such examination the information desired and required by the tribunal shall be plainly stated in writing and presented to said accountant, which statement shall be signed by the members of said tribunal, or by a majority of each class thereof. Attorneys at law or other agents of either party to the dispute shall not be permitted to appear or take part in any of the proceedings of the tribunal, or before the umpire.

SEC. 8. When the umpire is acting he shall preside, and he shall have all the powers of the chairman of the tribunal; and his determination upon all questions of evidence, or other questions, in conducting the inquiries then pending shall be final. Committees of the tribunal, consisting of an equal number of each class, may be constituted to examine into any question in dispute between employers and workmen which may have been referred to said committee by the tribunal, and such committee may hear and settle the same finally, when it can be done, by a unanimous vote, otherwise the same shall be reported to the full tribunal, and be there heard, as if the question had not been referred. The said tribunal, in connection with the umpire, shall have power to make, ordain and enforce rules for the government of the body when in session, to enable the busi-

ness to proceed with in order, and to fix its sessions and adjournments; but such rules shall not conflict with this statute, nor with any of the provisions of the constitution and laws of Ohio.

SEC. 9. Before the umpire shall proceed to act, the question or questions in dispute shall be plainly defined in writing, and signed by the members of the tribunal, or a majority thereof of each class, or by the parties submitting the same; and such writing shall contain the submission of the decision thereof to the umpire by name, and shall provide that his decision thereon, after hearing, shall be final. The umpire shall be sworn to impartially decide all questions that may be submitted to him during his term of office. The submission and his award may be made in the form hereinafter given, and said umpire must make his award within ten days from the time the question or questions in dispute are submitted to him. Said award shall be made to the tribunal; and if the award is for a specific sum of money, said award may be made a matter of record by filing a copy thereof in the court of common pleas of the county wherein the tribunal is in session. When so entered of record it shall be final and conclusive, and the proper court may, on motion of any one interested, enter judgment thereon; and when the award is for a specific sum of money, may issue final and other process to enforce the same.

SEC. 10. The form of the joint petition or agreement praying for a tribunal under this act shall be as follows:

To the Court of Common Pleas of _____ County (or to a judge thereof, as the case may be).

The subscribers hereto, being the number and having the qualifications required in this proceeding, being desirous of establishing a tribunal of voluntary arbitration for the settlement of disputes in the _____ (here name the branch of industry) trade, and having agreed upon A, B, C, D and E, representing the employers, and G, H, I, J and K, representing the workmen, as members of said tribunal, who each are qualified to act thereon, pray that a license for a tribunal in the _____ trade may be issued to said persons named above.

Employers.	Names.	Residence.	Works.	No. of employees

Employees.	Name.	Residence.	By whom employed.

SEC. 11. The license to be issued upon such petition may be as follows:

State of Ohio, }
 _____ *County.* } ss:

WHEREAS, The joint petition and agreement of four employers (or representatives of a firm, corporation or individual employing forty men, as the case may be), and forty workmen has been presented to this court (or if to a judge in vacation so state), praying the creation of a tribunal of voluntary arbitration for the settlement of disputes in the _____ trade within this county, and naming A, B, C, D and E, representing the employers, and G, H, I, J and K, representing the workmen. Now, in pursuance of the statutes for such case made and provided, said named persons are hereby licensed and authorized to be and exist as a tribunal of voluntary arbitration for the settlement of disputes between employers and workmen for the period of one year from this date, and they shall meet and organize on the _____ day of _____, A. D. —, at _____.

Signed this _____ day of _____, A. D. —.

_____ Clerk of the Court of Common Pleas _____ County.

SEC. 12. When the tribunal agrees to submit a matter in controversy to the umpire, it may be in form as follows:

We, A, B, C, D and E, representing employers, and G, H, I, J and K, representing workmen, composing a tribunal of voluntary arbitration, hereby submit and refer unto the umpirage of L (the umpire of the tribunal of the _____ trade), the following subject-matter, namely: [Here state fully and clearly the matter submitted.] And we hereby agree that his decision and determination upon the same shall be binding upon us, and final and conclusive upon the question thus submitted; and we pledge ourselves to abide by and carry out the decision of the umpire when made.

Witness our name this _____ day of _____, A. D. —.

[Signatures.]

SEC. 13. The umpire shall make his award in writing to the tribunal, stating distinctly his decision on the subject-matter submitted. And when the award is for a specific

sum of money, the umpire shall forward a copy of the same to the clerk of the proper court.

AN ACT

To establish a school of mines and mine engineering in the Ohio Agricultural and Mechanical College.

Ohio State University, establishment of a school of mines.

Course of study; school apparatus, etc.

Employment and duties of instructors.

Cabinet of specimens to be kept.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That the trustees of the Ohio State University be and they are hereby required to establish in said university, a school of mines and mine engineering, in which shall be provided the means for studying scientifically and experimentally the survey, opening, ventilation, care and working of mines; and said school shall be provided with a collection of drawings, illustrating the manner of openings, working and ventilating mines and with the necessary instruments for surveying, measuring air, examining and testing the noxious and poisonous gases of mines, and (also) with (the) models of the most improved machinery for ventilating and operating (all the various kinds of) mines with safety to the lives and health of those engaged. Said school shall also be provided with complete mining laboratories, for the analysis of coals, ores, fire-clays and other minerals, and with all the necessary apparatus for testing the various coals, ores, fire-clays, oils, gases, and other minerals.

SEC. 2. Said trustees shall employ competent persons to give instruction in the most improved (and) successful methods of opening, (and operating) surveying and inspecting mines, including the methods and machinery employed for extracting coal, ore, fire-clay, oil, gas and other minerals from the pit's mouth and for facilitating the ascent and descent of workmen, the draining and freeing of mines from water, the causes of the vitiation of air, the quantities of fresh air required under various circumstances, natural ventilation, mechanical ventilation by flues and fans, and other ventilating machinery, the use of air engines, air compressors and coal cutting machinery; also instruction in the various uses of coals, ores, fire-clays, oils, gases and other minerals, and the methods of testing, analyzing and assaying such minerals; also the methods employed in metallurgical and other processes in the reduction of ores and in determining the qualities of metals, particularly iron and steel, as shown by practical and laboratory tests; and there shall be kept in a cabinet properly arranged for ready reference and examination suitably connected with said school of mines (samples of the) specimens from the various mines in the State, which may be sent for analysis, together with the names of the mines and their localities in the counties from which they were sent, and the analysis and a statement of their properties attached; it shall also be his duty to furnish analysis of all minerals found in the State and sent to him for that purpose by residents of this State.

SEC. 3. There is hereby appropriated out of the general revenue fund the sum of three thousand, five hundred dollars (\$3,500), to be expended in the equipment, support and maintenance of said school of mines, as provided for in the first and second sections of this act.

Appropriation.

AN ACT

To amend section 1 of an act entitled "An act to compel children under fourteen years of age to attend school a certain length of time each year," of the Revised Statutes of Ohio, passed April 25, 1890.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, That section 1 of an act entitled "An act to compel children under fourteen years of age to attend school at certain lengths of time each year," of the Revised Statutes of Ohio, passed April 25, 1890, be amended so as to read as follows:

Children between eight and fourteen years compelled to attend school.

SEC. 1. That all parents, guardians and other persons who have care of children shall instruct them, or cause them to be instructed, in reading, spelling, writing, English grammar, geography and arithmetic, and every parent, guardian, or other persons having control and charge of any child between the ages of eight and fourteen years, shall be required to send any such child or children to a public or private school for a period of not less than twenty weeks in city districts, in each school year, commencing September 1, ten weeks of which, at least, shall be consecutive, which shall commence within the first four weeks of the first term of the school year; and in special, village and township districts, not less than sixteen weeks in each school year, eight of which shall be consecutive, unless such child or children are excused from such attendance by the superintendent of the public, private or parochial schools in cities, or by authority of the board of education in village, special and township districts, when it shall have been shown to the satisfaction of said superintendent, or said board, that the physical or mental condition of such child or children has been such as to prevent his, her or their attendance at school, or that said child or children are taught at home by some qualified person or persons in such branches as are usually taught in primary schools; and in case the said board or superintendent refuses to grant such excuse from attendance, the parent or guardian of such child or children shall have the right to appeal from the decision of the board to the probate court of the county, on giving bond, within ten days after such decision, to the approval of said court, to pay all costs made therein, and the decision of said court in the matter shall be final; provided, that all youths between eight and sixteen years of age, not engaged in some regular employment, shall attend school for the full term the schools of the district in which

they reside are continued in the school year, unless excused for the reasons named in this section, and if the parents or guardians having legal charge of such youth shall fail to send these youth to school regularly for said full term, or said youth shall absent themselves from school without satisfactory excuse, said parents and guardians and said youth shall be subject to the provisions and penalties of section 8 of this act.

Unlawful to employ children under fourteen years except under certain conditions.

SEC. 2. That no child under the age of fourteen years shall be employed by any person, company or corporation during the school term, and while the public schools are in session, unless the parent, guardian, or other person having care of such child, shall be able to give substantial proof that he or she has fully complied with the requirements of section 1 of this act, or that such child has completed the usual course of primary and grammar grades in some public or private school, and such person, company or corporation shall demand such proof before giving employment to any minor, and shall make a record of said proof given, and shall be required, upon the request of the officer (hereinafter provided for) to allow said officer to examine the said record, and also the record as provided for in section 6986aa of the Revised Statutes, and any person, company or corporation employing any child contrary to the provisions of this act shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action for debt in any court, or before any justice of the peace having jurisdiction, and such action shall be brought in the name of the clerk of the board of education.

Regarding minors over fourteen and under sixteen who cannot read and write English.

SEC. 3. That all minors over the age of fourteen, and under sixteen years, who cannot read or write the English language, shall be required to attend school at least one-half of each day, or to attend some evening school organized and maintained by the board of education, or to take regular private instruction from some person qualified, in the opinion of the superintendent of schools in cities, and the clerk of the board of education in special village and township districts to teach such branches until he or she shall obtain a certificate from the superintendent of schools in cities, and the clerk of the board of education in special village and township districts, certifying that said minor can read at sight and write legibly simple sentences in the English language, and every person, company or corporation having such minor in employment shall be required to exact such school attendance from such minor, and be prepared, upon demand of the hereinbefore mentioned officer, to furnish evidence that such minor does comply with the requirements of this act, and any person, company or corporation failing or neglecting to exact such school attendance from such minors, shall be liable as provided for in section 2 of this act; provided, such person, company or corporation shall not have made provision for the private instruction of such minors.

SEC. 4. That every parent, guardian or other person having charge or control of any child under the age of sixteen who has been discharged from any business in order to be afforded an opportunity to receive instructions or schooling shall send such child to some public or private school until such child shall have acquired such instructions as section 3 of this act requires, and in case of failure on the part of said parent, guardian or other person to comply with the provisions of this section and of section 1 of this act, unless such child shall have been excused from such attendance by the superintendent of public schools or the clerk of the board of education in special village and township districts for reasons stated in section 1 of this act, such parent, guardian or other person shall be deemed guilty of a misdemeanor, and shall, on conviction, be liable to a fine of not less than five dollars or not more than twenty dollars for the first offense, not less than twenty for each subsequent offense, or to imprisonment for not less than one month nor more than three. The said fines, when paid, to be added to the public school funds of such school district in which the offense occurs.

Where children have been discharged from employment by reason of this act.

SEC. 5. That all children between the ages of seven and fourteen years who are habitual truants from school, or while in attendance at any public or private school are incorrigible, vicious or immoral in conduct; and all children between said ages, and all minors between the ages of fourteen and sixteen who cannot read and write the English language, who absent themselves habitually from school, or who while in attendance at any public or private school are incorrigible, vicious or immoral in conduct, or habitually wander about the streets and public places during school hours, having no business or lawful occupation, shall be deemed juvenile disorderly persons and subject to the provisions of this act.

Habitual truants.

SEC. 6. That in cities of the first and second class the board of education of said cities shall be required to employ one or more truant officers to assist in the enforcement of this act, said truant officer to be vested with police powers, and shall be authorized to enter factories, workshops, stores, and all other places where children may be employed, and perform such other services as the superintendent of schools or the board of education may deem necessary to the preservation of the morals and good conduct of school children and for the enforcement of this act, and in special village and township districts the board of education shall be required to appoint some constable or other person as truant officer, with same power as said officers have in said cities, and the compensation of such officers shall be fixed by the board of education.

Truant officers to be employed in certain cities.

SEC. 7. That the truant officer shall make daily reports to the superintendent of public schools during the school term in cities, and to the clerk of the board of education as often as the clerk shall require it to be done in special

Truant officers to make daily reports.

village and township districts, and he shall also keep a record of his transactions, subject to the inspection of the members and officers of the board of education and it shall be the duty of the clerk of the board of education to provide suitable blanks for said truant officer.

**Duties of
truant officers.**

SEC. 8. That it shall be the duty of all truant officers to examine into all cases of truancy when any such come before their notice, or when requested to do so by the superintendent of public schools, or by the board of education, and to warn such truants, their parents or guardians, in writing, of the final consequences of truancy if persisted in, and also to notify the parent, guardian, or other person having the charge or control of any child between the ages of eight and fourteen years, that the said child is not attending any school, and to require said parent, guardian or other person to cause the said child to attend some recognized school within five days from said notice, and it shall be the duty of said parent, guardian or other person having the legal charge and control of said child, to cause the attendance of said child at some recognized school; if said parent, guardian or other person having the legal charge and control of said child, shall wilfully neglect, fail or refuse to cause said child to attend some recognized school, it shall be the duty of said officers to make, or cause to be made, a complaint against said parent, guardian or other person having the legal charge or control of such child, in any court of competent jurisdiction in the city, special village or township district, in which the offense occurred, for such refusal, failure or neglect, and upon conviction thereof said parent, guardian or other person, as the case may be, shall be punished by a fine of not less than five dollars nor more than twenty dollars, or the court may in its discretion, require persons so convicted to give bond in the penal sum of one hundred dollars, with one or more sureties to be approved by said court, conditioned that said persons so convicted shall cause the child or children under his or her legal charge or control to attend some recognized school within five days thereafter, and to remain at said school during the term prescribed by law; provided, that if said parent, guardian or other person in charge of such child shall prove inability to cause said child to attend said recognized school, then said parent, guardian or other person shall be discharged, and said court, upon complaint of said truant officer or other person, that said child is a juvenile disorderly person, as described in section 5 of this act, proceed to hear such complaint, and if said court shall determine that said child is a juvenile disorderly person within the meaning of this act, such child shall be deemed guilty of a misdemeanor, and said court shall thereupon sentence said child to some juvenile reformatory; provided, that no child or children over ten years old shall be sentenced by any court to a county children's home; and that, where in the judgment of the

trustees of any such home, it shall be declared by resolution at regular meeting by them held, that the character of any child thus sentenced and kept at such home is vicious, and so bad as to be detrimental and harmful to the habits and good morals of other children at such home, said trustees are hereby authorized and empowered to remove such child or children to the boys' industrial school at Lancaster, Ohio, or the girls' industrial home at Delaware, Ohio, as the case may be; nor shall such child or children be kept at any such home beyond the period prescribed in section 1, or until such child shall arrive at the age of sixteen years, unless sooner discharged by the board of trustees of said reformatory or home. Provided, however, that said sentence may be suspended in the discretion of the court, for such time as the child shall regularly attend school and properly deport himself or herself. It is further provided that if for any cause the parent, guardian or other person having charge of any juvenile disorderly person, as defined in this act, shall fail to cause such juvenile disorderly person to attend said recognized school, then complaint against such juvenile disorderly persons may be made, heard and tried and determined in the same manner as provided for in case the parent pleads inability to cause said juvenile disorderly person to attend said recognized school. * *

SEC. 9. That it shall be the duty of officers empowered or appointed under this act to assist in the enforcement thereof, to institute, or cause to be instituted, proceedings against any parent, guardian or other person having legal control or charge of any child, or corporation violating any of the provisions of this act; provided, that this law shall not be operative in any school district where there are not sufficient accommodations to seat children compelled to attend school under the provisions of this act, and that no prosecution shall be instituted against any parent, guardian or other person or child in charge of such, unless they have received due notification from an officer empowered under this act that they are acting in violation of this act.

Proceedings
when this act
is violated.

SEC. 10. When any truant officer shall discover to his full satisfaction any child under the age of fourteen years, wholly or partially dependent upon his or her own labor for a living, or who shall be the support of others unable to provide for their own sustenance, or when in the judgement of the superintendent of the schools, or of the board of education, it may be necessary for such child to contribute to the support of the family of which he or she is a member, it shall be the duty of said truant officer to report such case to the proper authorities, whose duty it is to look after and care for the poor, and to endeavor to obtain such relief as may release such child from labor for such length of time each year as will be required for compliance with section 1 of this act, but such child shall not be declared a pauper or removed to any infirmary, reformatory or children's home,

When this act
may be sus-
pended for a
time.

unless he or she shall willfully neglect to take advantage of the provisions made by said truant officer for his or her relief and instruction, and said truant officer failing to obtain such relief, the superintendent of schools, or the board of education, may make suitable arrangements for the private instruction of such child while so adversely conditioned.

**Duty of
teachers and
principals
under this
act.**

SEC. 11. That it shall be the duty of all principals and teachers of all schools, public and private, to report to the clerk of the board of education of the city, special village or township districts in which schools are situated, the names, ages, and residence of all pupils in attendance at their schools, together with such other facts as said clerk may require, in order to facilitate the carrying out of the provisions of this act, and the said clerk shall furnish blanks for said purpose, and said report shall be made in the last week of September, December, February and April in each year; and it shall be the further duty of said principals and teachers to report to the truant officers, the superintendent of schools or the clerk of the board of education, all cases of truancy or incorrigibility in their respective schools as soon after these offenses shall have been committed as practicable.

**When corpor--
ations violate
this act.**

SEC. 12. That when any of the provisions of this act are violated by a corporation, proceedings may be had against any of its officers or agents of said corporation, who in any way participate in, or are cognizant of such violation by the corporation of which they are the officers or the agents, and said officers or the agents shall be subject to the same penalties as individuals similarly offending.

Penalty.

SEC. 13. Any person or officer mentioned in this act, and designated as having certain duties to perform in the enforcement of any of its provisions, neglecting to perform any such duties, shall be liable to a fine of not less than twenty-five dollars, nor more than fifty dollars for each and every offense; and mayors, justices of the peace and probate judges shall have jurisdiction to try the offenses described in this act, and their judgment shall be final.

**Relating to
other statutes.**

SEC. 14. Any provision of statutes in force when this act takes effect, which conflicts with any provisions of this act, shall, the extent it is inconsistent with the latter, and not otherwise, be held to be superseded by this act. The provisions of this act shall apply to children entitled under existing statutes to attend school at the institution for the education of the blind, and the deaf and dumb. Other provisions of the statutes in force, relating to school affairs, shall not be affected by this act, sections 4023, 4024 and 4028 of the Revised Statutes are hereby repealed.

Passed April 25, 1890.

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